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OBSERVATIONS ON THE NATURE AND TREATMENT OF ACUTE INTESTINAL CATARRH, ESPECIALLY IN CHILDREN.

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IN this article I propose to discuss the affections known under the terms *catarrhal diarrhoea*, *infantile diarrhoea*, and *cholera infantum*,—the *acute gastro-enteritis* of children,—but exclude from consideration the phlegmonous and diphtheritic enteritis, as well as the traumatic variety, induced by external injuries or the introduction of foreign bodies into the intestinal canal.

When we examine the literature of the subject for the last twenty-five years, it becomes evident that, despite its copiousness, comparatively little has been added to our real knowledge of the nature of the affection. One part of its literature abounds in theories concerning the etiology of the disease, another treats of its localization and anatomical appearances, while a third discusses its management and treatment; but scarcely anywhere do we meet with attempts and researches to promote a deeper insight into the true nature of the disease.

As regards the anatomical appearances and seat of the morbid process, it has been shown, in the dissecting-room, that various conditions, from a state of the most severe congestion and inflammation of the inner coats of the digestive tract to a complete anæmia, may be observed; and that no part of the tract can be considered exempt, although the favorite seat of the affection is either the lower portion of the small intestines, more rarely the descending colon and the rectum, or the duodenum. In the latter case, nausea and vomiting, which set in from the beginning, are frequently associated with constipation, preceding the diarrhoea, and are recognized as valuable symptoms of topical diagnosis. In the former, the pulpy, greenish, yellowish, and grayish brown, or the so-called rice-water stools are the prevailing phenomena.

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Notwithstanding the variability of the morbid anatomical appearances, it has not been deemed a matter of sufficient importance to raise the question whether or not they should be considered as evidences of different affections, or simply different phases of one morbid process, occurring in the course of its evolution. The reason is that the symptomatology did not present sufficiently distinct features to justify its division into groups of different character. The treatment, also, down to the present time has continued to be purely symptomatic and empirical, with the exception of the introduction and addition of the so-called antiseptic remedies, which recommended themselves from a certain etiological point of view, of which we will speak farther on. The usual mode of treatment, in conformity with the symptoms and their supposed cause, is the following. In cases of constipation, or where this condition precedes the diarrhoea, with or without vomiting, or where articles of food are passed undigested, the rule is to resort to mild purgatives, such as castor oil or calomel, which are not liable to produce an increase either of peristaltic or of the endosmotic action. Where there are indications of an abnormally excited peristalsis, recourse is had to opiates, of which the morphine acts, as experiments have shown, upon the splanchnic nerve with the same inhibitory effect as digitalis upon the vagus. To these, lately, yet with little success, hydrate of chloral has been added, like the former, combined with carminatives and mucilaginous vehicles. In order to overcome the supposed congestive condition of the mucous membrane, antiphlogistics and vegetable as well as mineral astringents—as alum, subnitrate of bismuth, acetate of lead, nitrate of silver—are given, and, in order to excite the digestive power, pepsin preparations, bitter tonics, and stimulants. From time immemorial, however, the most extensive use has been made of antacid remedies, such as carbonate of lime, soda, magnesia, bismuth, zinc, etc. This treatment has for its basis the commonly entertained view that the *fons et origo mali* is the rapid acid fermentation of material accumulated in the alimentary canal. This view found ready support in the so-called germ-theory of disease, or the discovery of the infective or bacteric nature of a great

number of diseases to which more especially those parts of the system are shown to be subject, which are directly and continuously exposed to the action of external influences. It ascribes the phenomena of fermentation and putrefaction, and the normal and abnormal interchange of matter accompanying the same, to chemical processes connected with the life of micro-organisms of various orders belonging to the vegetable kingdom. These, like all plants, are supposed to have their preference as regards the soil upon which they grow and thrive, and to demand a certain temperature for their development and multiplication.

With the adoption of this theory the so-called antiseptic remedies, as corrosive sublimate, creasote, carbolic acid, salicylic acid, benzoic acid, resorcine, etc., were added to the list of remedies with the view of combating the cause of the disease by the destruction of those parasitic forms of life which were found to be the constant accompaniments of the morbid process. While I leave it undecided whether this theory is correct, I am willing to admit that the co-operation of such influences is more than probable.

Anatomically, the morbid changes consist most frequently of streaked or punctiform injections of the swollen and relaxed mucous membrane. The epithelial cells are increased in size and number, and undergo a process of softening and partial denudation. Peyer's patches and the solitary glands are swollen, and, in the earlier stages, injected and of a more or less dark red color; subsequently they become dark gray or light-colored. The submucous areolar tissue in the descending colon and rectum is often infiltrated by a serous exudation. In the advanced stages a purulent infiltration of the tissues, frequently associated with hemorrhagic foci, may be observed.

The characteristic physiological phenomenon will be found in the altered condition of the contents of the intestines. These are sometimes thin and watery, turbid from flocculi of fibrin, and undigested articles of food; in other cases they are of a greenish-yellow or yellowish-brown color, or loamy, resembling moist clay. The amount of undigested or half-digested material may be considerable; and, in connection with their decomposition, gaseous substances—as hydrogen, carburetted and

sulphuretted hydrogen, etc.—accumulate, and may distend the intestinal tube enormously, and thereby gravely interfere with its circulation. If this condition continues, the distended portions may become completely anæmic. Invariably, however, there is an admixture of abnormally large quantities of mucus, which, in the incipient stages, forms tough, glairy shreds and balls sometimes of considerable size. In the later stages the mucus is of a thinner consistence, turbid, and more uniformly mixed with the other contents.

The main phenomena connected with the morbid process, aside from the symptoms of the general disturbance of health, which will not be discussed here, are the frequency of the evacuations and their composition, and the more or less marked or even complete indigestion. The stools, of course, are precisely of the same character as the contents of the intestinal canal heretofore described.

That these phenomena indicate the existence of an abnormal irritation of the digestive apparatus is not disputed; yet the question is, What is the irritating agent? In order to answer this question, I have for a number of years examined chemically evacuations in all stages of the disease, and have especially directed my attention to the composition of the mucus which presents itself as an—in some respects—abnormal admixture.

Mucus is a normal product of secretion of the mucous membranes, but as regards its amount it may become of pathological importance, and suspicion is justified that in such cases its composition, chemically as well as microscopically, differs from that of the normal product. Fortunately, it is not difficult, if there is material enough, to separate the mucous discharge from the other substances present, in sufficient purity for analysis. It would seem proper, however, to state here that such cases only were considered as affording an opportunity to work up the material immediately after the discharge.

The pathological mucous discharge is microscopically recognized by its great increase of corpuscular elements, both in size and number. These cell-formations must be considered as the product of a morbid, hyperplastic process, by which large quantities of nutrient material are consumed at the expense of the normal

interchange of matter and nutrition of the tissues involved. The process is therefore entirely of an inflammatory nature, although the over-production of corpuscular elements, at least in the earlier stages, seems to belong exclusively to the order of epithelial formations. This is the true epithelial catarrh, which is essentially of the same character in whatever region of the mucous tracts it may occur. It is conceded that this process is, in all cases, preceded by capillary hyperæmia, which may be either active or passive, and is liable at any time to change from the epithelial form into true purulent catarrh, or into intermediate forms, in which either the one or the other of the corpuscular elements predominates in the discharge. In the epithelial form, however, I am inclined, from my own observations, to ascribe significance to a condition which should be called hyperlymphosis rather than to the hyperæmia. In cases of intestinal catarrh the hyperlymphosis is a phenomenon of constant occurrence, and is a predominant condition in the course of the disease, especially in infants, where the intestinal lymphatic system is developed in inverse proportion to the youthfulness of the individual.

It is obvious, since the whole process is of an inflammatory nature, that the conditions described may be brought about by all such causes as are liable to produce inflammations, the characteristic feature being the result of the peculiar anatomical and physiological relations of the tissues involved. The process in its earliest stage is evidently but a physiological reaction, tending to restore a locally disturbed equilibrium, and probably occurs in innumerable instances without giving rise to any symptoms of disturbance of the general state of health.

Nevertheless, it should be remembered that the majority by far of all physical disorders consists in affections of the mucous integuments, and prominently of those which form the lining of the digestive tract. No other organ of the human body, the skin not excepted, is more injudiciously treated by man himself, and here incalculable influences commence to operate, which are induced by the presence of foreign substances in contact with the same.

It will be readily perceived that an increase in the production of mucus, and the

copious discharge and new formation of epithelial elements, on the surface of the mucous membrane of the alimentary canal, must either diminish the secretion of gastric juice or reduce its quality. In both cases, on account of the deficiency of digestive energy and the retention of dead and easily decomposable material, this, if not quickly removed, will, at the high temperature of the body, rapidly undergo fermentation and putrefaction. The liability to this will be increased, since, in consequence of the indigestion, the bile is not poured forth in the usual and normal amount. For the secretion of bile, which is altogether dependent upon excitations from the digestive tract, becomes, as physiological experiments have shown, at once deficient or ceases entirely, in proportion to the degree of the digestive disorder. The weight of this will be understood from the fact that the bile possesses a highly antiseptic property, and that its main office, aside from assisting in the assimilation of fat and peptones, is to stimulate peristalsis, and to arrest the decomposition, or prevent the putrefaction, of the intestinal contents.* The deficiency of bile will be readily recognized by the color of the evacuations,† and by their offensive and putrid odor. In duodenal catarrh, from the closure of the common bile-duct by the swollen membrane, jaundice is not unfrequently observed.

Now, all the conditions heretofore mentioned, with the exception of the putrid processes, which, however, come into action only in the advanced stages of the morbid process, scarcely suffice to account for the most prominent symptom connected with the disease, the diarrhoea,—viz., the frequency and the fluidity of the motions. That the latter in part is due to a serous exudation from the submucous cellular tissue is more than probable. In infants, during dentition and at the time of weaning, the swallowing of large quantities of saliva and mucus may have the same effect. But the high degree of irritability of the digestive tract and the increased peristalsis, which interferes with the proper diges-

* Animals with an artificial fistula of the gall-bladder always suffer from the effects of putrid processes in the alimentary canal, and die with symptoms of septic poisoning, while lesions in no other organs of the body are observable.

† It is an error to suppose that greenish, so-called bilious stools of children contain an excess of bile. The natural color of bile is brown (biliphaein), which is transformed into biliverdin in the cases referred to by the morbid mucus acting upon it.

tion of the intestinal contents, seem to point to the direct action of another factor.

The normal physiological mucus constitutes a very weak saline solution of sodium and potassium chloride, sodic phosphate, etc., containing, as a characteristic organic principle, mucine, a substance belonging to the albuminoid compounds. It differs from albumen, however, by its smaller amount of carbon and nitrogen, and by the absence of sulphur. It is not coagulable by boiling, and possesses in a high degree the power of absorbing water, and swelling up to a gelatinous and sticky mass of semi-fluid consistence. The reaction of mucus is probably neutral, or it vacillates between a slightly alkaline, and, from the admixture of saliva or other secretions, slightly acid reaction, and occasionally, like other organic fluids, may react both ways. As regards its functions, it is more than probable that it is purely excrementitious, and serves only as a coating which protects the surface of the mucous membranes, and relieves them from contact with the excreted materials and foreign substances. It is to some extent the analogue of sweat, and may, like this product, be at times of very variable quantitative composition. The different kinds of mucus as secretions from different membranes also vary considerably in their chemical constitution and general appearance. It may be proper, therefore, to remark that we here take into consideration only the mucous discharge from the digestive tract. The leucocytes, white cells or ordinary mucus-corpuscles, are not constant constituents of normal mucus, although they may be found occasionally in limited number without indicating a morbid condition.

The normal mucus does not belong to the class of organic products, which are easily subject to dissociation, or which form a favorite nidus for the development and preservation of micro-organic life. Yet the contrary must be said of the pathological product. This product, which is microscopically characterized, as we have seen above, by the extensive growth in it of corpuscular elements, differs materially in its composition from the normal. As might be expected, it first contains albumen, at times in comparatively considerable quantity. Aside from this, there is a remarkable increase of earthy and al-

kaline phosphates, which, in the form of the triple phosphates, are frequently found precipitated in their characteristic crystals. On account of the presence of both constituents, it affords an excellent soil for the production of microscopic forms of life. It is at all times disposed to decomposition, among the products of which, from the dissociation of albuminous substances, ammonia is the most noteworthy. Its reaction is accordingly decidedly alkaline.

It is evident that an organo-plastic fluid, of the kind here described, in a state of decomposition, brought into contact with tissues which prepare and absorb the nutrient material for the whole body, cannot fail to have a decided influence upon these processes. I have mentioned above that the large consumption of alimentary material in the excessive production of morbid new formations, forms one element of pathogenic importance. The fermentation and putrid decomposition of organic substances in direct contact with living tissues, a process by which large quantities of oxygen, destined for the life and the preservation of the tissues, are withdrawn from them, while poisonous gases are developed, which act chemically and mechanically upon the parts involved, furnishes a second deleterious factor. A third will be found in the vast production of micro-parasitic life, which thrives at the expense of the life of the tissues invaded by them. And a fourth, in the poisonous and irritating action of the products of decomposition of dead organic matter, among which, aside from organic alkaloids, the nature and property of which have not yet been sufficiently studied, the radical of all, *ammonium, in statu nascendi*, plays the most important rôle.

It has long been known that ammonia acts violently upon the peripheral nerve-expansions. In the intestinal tract in connection with the conditions here discussed, aside from neutralizing the normal acidity of the gastric juice, it must be considered the prime factor in the production of the increased peristalsis. The same substance, with precisely the same action, is the cause of the profuse peristaltic diarrhoeas in certain stages of Bright's disease (the interstitial form). In this case, the ammonium, in the form of ammonium carbonate, is the product of the decomposition of urea, a part of which, in

consequence of the deficient function of the kidneys, is excreted with the intestinal secretions.

A similar irritant condition is produced and kept up by this agent in the catarrhal affections of the pelvis of the kidneys and of the bladder. The morbid process, especially in the latter, can be considered as in many respects closely analogous to intestinal catarrh, as the incipient stage of this disease is likewise characterized by a hyperproduction of mucus, and by its pathological and pathogenic constitution. In the urine it sets up at once an alkaline fermentation, and induces the decomposition of urea into ammonia. Thus, there are in the contents of the bladder all the conditions present, by which its mucous membrane must become violently irritated, and those which develop another evil by the growth and preservation of micro-organic life.

It will be seen from the foregoing that the result of the chemical study of intestinal catarrh, presented here, would seem rather to favor the theory of an alkaline diathesis as the true condition and nature of the disease. This is correct as far as the incipient stages and the majority of the cases are concerned. But I am far from disavowing its septic or bacteric character. Nor is it intended here to dispute the occurrence of acid fermentations in the digestive tract in connection with intestinal catarrh. These are not unfrequently observed in the advanced stages of the disease, especially when fatty substances accumulate in the intestinal canal. Very probably in these cases the life-process of micro-organisms facilitates the liberation of the fatty acids or the formation of derivatives of these, some of which undoubtedly belong to the class of irritant poisons. Acid fermentation as an incipient state is not, however, of frequent occurrence, but may be observed in any case where fatty substances, which have already undergone a partial decomposition, have been introduced into the digestive tract.

Concerning the treatment of intestinal catarrh and kindred conditions, it should be the rule that early (even in the mildest affections) medical aid should be resorted to. Against the use of the favorite remedies, enumerated in the foregoing, no objections shall be raised here, but it is obvious that their administration should

be in conformity with the result of physical diagnosis. Here I would suggest, as an additional aid, a more thorough examination of the evacuations of the vomited matter, the discharges from the cavity of the mouth, the coating of the tongue, and, eventually, the urine, since the uropoietic system in the alkaline diathesis is frequently drawn into sympathy from the beginning. The examination is simply made as regards the reaction of the discharges, and whether there is a difference between the different discharges in this respect or not, and as regards the presence and the amount of ammonia. For the latter Nessler's solution can be used; for ordinary practice, probably the former, which can be applied everywhere, will fully suffice.

The selection of the proper medicines follows from the examination. In cases of alkaline diathesis the use of acids is indicated. In the early stages, and as long as large quantities of glairy mucus are discharged, this will almost always be the condition. Of the mineral acids, sulphuric acid, in the form of Haller's elixir, had for years a good reputation without any assigned reason. A greater favorite, however, is hydrochloric acid, as a restorer of indigestion: to its presence in some acid pepsin preparations a great part of the favorable action of these is probably to be ascribed. I confidently recommend the use of lactic acid, especially on account of its associated antiseptic properties. It is conveniently administered in combination with a bitter tonic, as follows:

R Lactic acid, 20;

Glycerin, 20;

Elixir of calisaya bark, 500,

to which from 15 to 40 minims of tinctura nucis vomicæ may be added, according to the age of the patient; to be given in $\frac{1}{2}$ to 1 teaspoonful, dessert- or tablespoonful doses according to age. Another valuable remedy will be found in tannin, which acts as an acid, an astringent, and an antiseptic,—as the latter by its affinity to organic alkaloids, which are always liable to be the products of putrid processes. It is of especial service in the diarrhœa and vomiting of nurslings, in doses of from 0.06 to 0.12 gram per diem.

In cases of acid fermentation, in the incipient stage, the immediate removal of the contents of the digestive tract by a mild purgative recommends itself, and

can also be safely resorted to, followed by antacids and opiates, in the advanced stages of the disease.

The medical treatment, of course, as usual, is at all times assisted by appropriate dietetic measures, and, if necessary, by repeated warm, tepid, or even cold baths of short duration, by cold spongings and rubbing, or by warm compresses of either spiced or pure alcohol and water.

A CASE OF PHOSPHORUS-POISONING WHICH COULD NOT BE DIAGNOSED EITHER IN THE LIVING BODY OR FROM THE MACROSCOPIC AUTOPSY.

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IN the session of the Society of Physicians, Vienna, March 31, 1876, I had the honor to present the history of a case which, not only from intrinsic value but also from collateral issues, excited the interest of the assembly. For this reason it has seemed to me worthy of publication. Other physicians, possibly, may have had such cases, or will in the future have them, and to this latter class this report may be of some service.

Upon the evening of the 21st of March, 1876, a shoemaker's apprentice, Anton Jinesek, nineteen years of age, came to my wards for admission. He was a well-nourished, powerfully-built individual, with good muscles, and of a somewhat pale exterior. According to his story, he lived in very favorable circumstances, in a healthy, dry dwelling, in the Ottakring, an elevated suburb. He worked in a large room, with only one comrade. His food, consisting chiefly of beer and meat, was amply sufficient. He expressed himself as perfectly contented with his lot in life. The disease on account of which he presented himself to the hospital began six days before. On his cheeks and thorax red spots, completely isolated, were noted. These became bluish red next day, and their number increased daily.

On 25th March, these spots were noted not only upon the face and thorax, but also upon the extremities, and in much greater numbers. They did not lose their color upon pressure, and were easily recognized as hemorrhages. These hemorrhages were evidently of different ages. While some

of the youngest were possessed of a very lively red color, the oldest ones were dyed bluish red, or were of a brown tint. Also, the forms of the isolated hemorrhages were not always the same in different portions of the skin. Upon the face and trunk they consisted chiefly of small, round petechiæ, of the size of a millet-seed, while upon the extremities they appeared radiating, as if the individual had scratched himself very hard. Upon the legs and feet, especially, they were in such large numbers that the entire surface was of a uniform, diffused redness. The gums were slightly swollen. The entire buccal mucous membrane was pale, and upon the tongue and lips were situated small ecchymoses. The conjunctiva of both eyes, especially of the left, were covered with hemorrhages.

The intellectual faculties, according to the cultivation of the individual, appeared perfectly normal. To a question addressed to him, he gave a brief answer. He complained of no pain, only of weariness, and of increasing inability to work.

The urine, voided in normal quantity, was of a dark-red color, and deposited, upon standing, a large sediment. This sediment proved to be chiefly red blood-corpuscles. The chemical examination, by Prof. Ludwig, demonstrated the presence of much albumen.

It will be borne in mind that in a disease, much resembling the present one, termed "*morbis maculosus hæmorrhagicus Werlhoffii*," or "*land scurvy*," the patients are generally emaciated, cachectic individuals, but that sometimes well-nourished, powerfully-built individuals may be attacked. This disease is rare; and, up to the present time, no satisfactory explanation of the fragility of the vessels, and of the cutaneous hemorrhages, has been given. The present case resembled very much this disease, although no hypothesis as to the origin of the disease could be formed.

To fulfil indications, dilute sulphuric acid was given internally, and the patient's body was washed with vinegar.

The 26th March passed without change in the condition of the patient. Upon the morning of the 27th March, while the cutaneous appearances remained, the same signs of deranged action of the central nervous system appeared. By close observation, it was possible to

see that both sides of the face were not perfectly symmetrical. Upon the right side, the naso-labial fold was straightened out. The right nostril was smaller than the left. The corner of the mouth was drawn downwards, and in whistling or blowing the lips were not properly approximated. The tongue deviated to the right,—in a word, a right-sided paralysis. The patient was unable to speak perfectly distinctly: when attempting to utter a sentence, it required great time and trouble to begin. It was only by the strictest attention that it was possible to make out the words uttered. The letters *l* and *r* were especially hard to sound. The answers to questions put to him were perfectly rational.

Motion in the extremities was preserved, although there was less power in the right hand than in the left. The patient walked to any given point as well with shut as open eyes. No abnormality was detected in either sight or hearing. It was supposed, therefore, that a hemorrhage into the left cerebral hemisphere had occurred.

In the afternoon, the condition in general remained the same. The patient ate with as much appetite as upon previous days, and complained of no pain. His difficulty in speaking augmented until it was impossible to understand one word. In vain he moved his lips; he could not utter a syllable. About midnight violent vomiting occurred. At first came undigested food, afterwards followed bile-colored mucus. The odor of the matter vomited was sour, which gave occasion to further inquiry. After administering soda-water, the vomiting ceased. Shortly after this the patient fell asleep, and awoke at 5.30 o'clock A.M. At this hour he exhibited great uneasiness, tried to speak, but failed. He touched his head significantly, as if he felt pain. Shortly after this he fell into a state of collapse, and died within half an hour, 28th March, at 6 o'clock A.M. The cadaver appeared very pale, white, like wax, showing a trace of a yellow tint. The cutaneous hemorrhages, therefore, were more visible than in life, as they contrasted strongly with the wax-like cadaver. The autopsy, awaited with great expectation, resulted as follows. The body was of middle size, well proportioned, and pretty well nourished, pale, with spots of post-mortem ecchymosis upon the back. Upon the integument, everywhere, little spots or dashes of blood,

of the size of a millet-seed, were perfectly visible. These existed in greater quantities upon the left thigh: upon single places—namely, the skin over the epigastrium, over the symphysis, over the exterior surface of the thighs—spots of hemorrhage of a radiating character were seen. His hair was light, and the pupils of both eyes equally dilated. His neck was short, while the thorax was long, narrow, but vaulted; the abdomen was contracted; all the muscles were stiff, rigid in rigor mortis. The meninges of the brain were well filled with blood. The top of the skull was spacious, with thin walls, and was intimately attached to the dura mater, particularly along the lines of the sutures. The pia mater was very fragile, and its vessels were filled with blood. The convolutions of the brain were flattened out, so as to be quite smooth in many places. The brain was congested, moist, and tenacious. The ventricles of the brain were somewhat dilated, and filled with almost perfectly transparent serum. In the left cerebral hemisphere, in the middle of the thalamus opticus, and towards the surface of the lower half of the left lobe parietalis, was a cleft the size of a walnut, filled with coagulated blood. Numerous capillary hemorrhages in the adjoining brain-substance, sometimes conglomerated, were found. The spinal marrow was, for the most part, apparently perfectly normal. The arteries at the base of the brain contained fluid blood, and were very fragile. The bronchial tubes were found filled with blood-tinged mucus. Ecchymoses upon the mucous membrane of the pharynx and larynx were noted. The lungs were adherent to the pleuræ, were filled with blood, and oedematous. Sub-pleural ecchymoses were observed.

The pericardium contained a few grammes of clear serum. The heart, of normal size, was flaccid, especially the right side. Ecchymotic patches, more or less confluent, were noted upon the visceral, more than upon the parietal, layer of the pericardium. In the cardiac cavities only fluid blood was found. In the substance of the left ventricle, particularly in the septum, but also in the right ventricle, numerous capillary hemorrhages were observed. The cardiac substance was of considerable consistence. The aorta and isthmus could be entered by the middle finger.

In the cavity of the abdomen several

grammes of serum, of reddish tint from blood, were found. Numerous capillary hemorrhages were observed under the serosa, covering the stomach, small and large intestines. The liver was of a pale brown color. In the gall-bladder a little light-brown bile was visible. The spleen was somewhat enlarged, with hypertrophied Malpighian capsules. In the stomach was found yellow mucus. The gastric mucous membrane was swollen, and many ecchymoses were seen. The intestinal mucous membrane was altered, and the tract contained chyme and fecal matter. The connective tissue around the right kidney was found suffused with blood. The mucous membrane of the calyces, infundibula, and pelvis were also congested. The cavity of the renal pelvis was filled with blood. The mucous membrane of the ureters was pale. The urinary bladder contained a small amount of bloody, turbid urine. The mucous membrane of the bladder was spotted with ecchymoses.

Incisions into the muscles of the arm, thigh, calf of the leg, made visible small capillary hemorrhages.

The result of the autopsy made no clearer the cause of the hemorrhages than the observation of the living body. It only proved the supposition, made *in vivo*, that the man had died from a serious central hemorrhage. As these cerebral hemorrhages are rare in young people, and as the arteries, generally, were not diseased or fragile, the enigma became still greater.

Prof. Heschl was, equally with myself, dissatisfied with the results of the post-mortem examination, and undertook himself the microscopic examination of the tissues. During the examination he found the pathological changes characteristic of phosphorus-poisoning. In the apoplectic region of the brain, granules of fat, and other evidences of extensive fatty metamorphoses and infiltration, were found. The same condition obtained in other parts of the brain in different degrees. The adventitia of the small arteries of the brain and the capillaries exhibited the same change. Fatty degeneration was found to obtain in the most distant portions of the body. Deposits of fat-granules were found in the cells of the liver as well as in the epithelium of the urethra. In all the muscles, cut obliquely, as well in voluntary as in involuntary muscular fibre, deposits of fat-granules were found.

One symptom only was lacking to establish a diagnosis,—namely, icterus. It has been mentioned that the skin, after death, had a slight yellowish tint; but this was very slight, and was not noticeable during life. How is it possible that icterus should be absent in phosphorus-poisoning? If one looks over the literature of the subject, and notes the recorded cases of phosphorus-poisoning, he will see that they may be all included under two categories—(1) those in which icterus appeared, and (2) those in which it was absent. When icterus did not appear, a large amount of the poison was taken, and the individual died before it could be developed. Also, when a small quantity is taken, and recovery follows rapidly, no icterus is developed. If, however, the sickness last one week or more, icterus invariably results. Hänel, in his dissertation, published in Leipsic, 1858, "*De Intoxicatione per Phosphorum aucta*," mentions three cases, of which two recovered, but the third had a fatal issue. In the first and third cases, icterus was present. In the second case, no icterus appeared, although in this and the other two, phosphorus was uncontestedly demonstrated in the matters vomited.

Simon, in Casper's "*Manual of Medical Jurisprudence*," 1871, cites seven cases of death from phosphorus-poisoning. In the first, second, third, fourth, fifth, and seventh cases, no mention of icterus is made. In the sixth case only a slight icterus occurred, though the duration of life after the poisoning was very different in the different cases. In the series of cases, death appeared after a few hours in the first case; in the second case, after twelve hours, thirteen grammes of phosphorus having been ingested; after eight hours in the third case; after twenty-six hours in the fourth case; after eight days in the fifth case; after six days in the sixth case. The seventh case presented much the same symptoms as the case we are now discussing, so that there was probably no presentiment of the cause of death.

Bamberger, in his article* upon the theory and treatment of phosphorus-poisoning, states that in his experiments with animals he never found icterus in animals acutely poisoned; on the contrary, he always found extensive fatty degeneration,

* *Medicinische Zeitschrift*, E. Bd., 1 Hft., 1865.

and he considers this pathological change as perfectly characteristic of phosphorus-poisoning.

It only needs to be proved that our patient really took phosphorus. Owing to the facility with which the poison can be procured, Casper justly remarks, "It has become with us the most fashionable form of poisoning, and has superseded all other poisons;" but it was impossible to think of suicide in the present case, as the patient expressed himself as perfectly satisfied with his condition in life, his master, and his fellow-workmen. A murder was still more improbable. Through the courtesy of Dr. Weinberger, the physician of the corporation of shoemakers of Vienna, the matter was made much clearer. He told me that it was the custom among the shoemakers' apprentices to put the heads of matches into the bread and beer of their fellow-workmen, in order to enjoy the grimaces of the teased ones whenever they tasted the beer or bread so disgustingly prepared. Direct inquiry at the shoemakers', by Dr. Weinberger, showed that our patient, particularly, was in the habit of practising the joke, and that he enjoyed exceedingly the grimaces of his comrades. Whether one of his comrades had taken revenge, or whether he himself had taken the beverage prepared for another, is impossible to say. Of course, such information has for us no special interest, after the fact that such was his habit has been fully established.

According to Prof. Hoffman, one packet of matches, covered with yellow paper, as they ordinarily occur with us, contains one gramme of phosphorus. This quantity, however, is relatively very large, and it is, therefore, reasonable to suppose that our patient had taken very much less than one gramme. If we now take in connection with these citations from different authors the history of Jinesek, we may be permitted to state the whole matter thus:

From the microscopic, pathological, anatomical characters of the tissues, it is in the highest degree probable that phosphorus-poisoning existed. By no other known process could such lesions as described, so varied in kind and degree, be produced.

The information of Dr. Weinberger renders the supposition still more highly probable. In fact, the probability almost attains to certainty.

The quantity of phosphorus swallowed could not possibly be so great as to cause

the immediate death of the patient. The hypothesis is that if the fatal cerebral hemorrhage had occurred in another organ not so essential to life, the patient would probably have recovered from his illness.

I hope that this paper will be the cause of observing more clearly and distinctly all the symptoms of purpura-patients, and that in every case a chemical analysis of any vomited matter will be made.

March 1, 1882.

ADHESIVE STRAPS UNITED BY BUCKLE AND TONGUE IN FRAC- TURE OF THE PATELLA.

BY E. T. BLACKWELL, M.D.

THE plan of Dorsey, itself a figure of eight with its folds secured to the posterior splint, has been employed with various modifications and many different materials. Agnew's substitution of adhesive straps for the tapes of the latter, with the addition of a key, working in the posterior splint to adjust the force applied, is, perhaps, the best. All the forms of Dorsey fail to apply the power in the line of resistance. The hooks of Malgaigne are not liable to this objection, but their application to the living tissues is dreaded by both surgeon and patient. Extension of the quadriceps muscle by weights suspended from the surface of the thigh by means of adhesive plaster, and counter-extension by sand-bag to inferior surface of the patella, embody an efficient principle of treatment which can only be carried out in one position, and this is tedious and irksome. The lock-strap is inefficient from the necessity of frequent reapplication to regain the loss occasioned by the slipping of the skin and superficial fasciæ upon the muscles, whereby the extension and counter-extension are diminished.

The apparatus that I have devised obviates this latter difficulty, and those which lie against the other forms: it is easy of application, comparatively painless, makes traction in the line of resistance, and may be tightened daily without disturbing the fragments.

The force is applied as follows. Take two pieces of perforated plaster in rubber combination, long enough to cover the leg and thigh respectively, and about three inches wide. A few inches from the end of each, cut in equally from both edges, so that these will meet when the

spread surfaces are turned together. This forms a tongue for one of the strips. To the corresponding one a strong buckle is to be attached by sewing. Fasten one strip to the leg, so that the buckle is opposite the fracture; the other to the thigh, so that the point of the tongue will reach and pass through the buckle and be lightly secured. Strips of plaster may be placed across the extending ones for greater security. The spiral is next applied above and below the knee. A small, rather firm compress is placed beneath the extending and counter-extending bands, so that, as the tongue is now forcibly drawn through the buckle, the severed portions of bone may be brought together. This has occurred immediately in the cases operated on by me, though, if the gap were wide, it might have to take place gradually. Carded cotton is to be tucked beneath the buckle to prevent chafing. The spiral bandage is now to be continued about the parts in such a way as to co-operate with the force already applied. A splint of some plastic material is now to be moulded to the limb posteriorly, and fastened in the usual way, and the patient's foot so adjusted upon a pillow as to prevent all strain upon the tissues in front of the limb. Daily inspection is necessary, in order that the force exerted be efficient and comfortable. When union is secured, but not firm enough to justify passive motion, the immovable apparatus may be applied, the silicate dressing being perhaps the best. Near the end of the sixth week, possibly sooner, passive motion may be commenced, the surgeon keeping up firm pressure above the upper fragment by one of his thumbs. A suitable liniment with friction may be used about the stiffened tissues if thought necessary. Two cases are herewith subjoined in which this treatment was successfully carried out.

Case I.—In the winter of 1879-80, Mr. D., an athletic young farmer, had one of his patellæ fractured by being suddenly precipitated from a prostrate tree, upon which he was standing while wielding an axe. The family physician applied a long posterior splint, and elevated the limb. On its failing to unite in the time usually allowed in fracture, I was called to his assistance. The bone was found to be broken transversely, and one of the fragments vertically. Adhesive straps were applied as detailed above; the posterior splint being retained. Firm union followed, the stiffness resulting from the long disuse of the

limb was successfully overcome, and the patient was able to follow the plough and to do all farm-work without any limp.

Case II.—Mrs. S. sustained fracture of right patella by a trip, occasioned by the starting of a car from which she was descending, about noon, January 17, 1882. When I saw her at four o'clock P.M., the parts about the joint were greatly swelled, and there was extensive ecchymosis beside and beneath. The fracture was across the lower third. Adhesive straps were applied, as heretofore described, binders' board being adapted to the limb posteriorly.

January 23.—Additional force has been applied through the tongue and buckle, from day to day. The broken portions are in good apposition, the line of severance being just distinguishable. The direction of traction appearing to be rather to one side, additional straps and a buckle were placed beside those first affixed, in the same way.

January 27.—The limb still shows the extensive suggillation which has been so marked along the sides of the knee, and in the popliteal space, extending far up the posterior and outer side of the thigh. The limit below seems to be continuous with the bursa of the joint. The swelling—great at first—has mostly subsided. The portions of the patella, never very widely separated, appear to be closely approximated. The limb is kept elevated, so that no strain occurs to the great muscles on the front of the thigh.

February 11.—The fractured parts are well apposed. The force, lost by the continual "giving" of the exterior tissues, was regained by shortening the strap to which the buckle was attached, and turning in an additional portion of the opposite strap, allowing it to be pulled farther through. A thin layer of carded cotton was now spread over the constricting bands, and the silicate dressing was applied in the usual way, additional binders' boards being placed posteriorly, with an interval between the pieces for facility of cutting through in removal. The apparatus did not secure absolute immobility; but the patient kept the limb supported as before, and the indications were fulfilled.

February 17.—Applied additional binders' board,—an entire sheet in all,—fastened the whole securely by a roller, and the solution of silicate of sodium.

February 25.—Removed the fixed dressing on this, the fortieth day of treatment, by cutting through the coverings on the posterior of the limb. The line of union is well defined, the upper fragment being slightly depressed below the lower piece. Some passive motion was made, the thumb of the left hand making firm pressure against the upper edge of the knee-cap. This was continued daily, the silicate splint being worn meanwhile. Notwithstanding Mrs. S. had some intercurrent troubles, including fever and the casting

off of a fœtus of the early months, the passive motion was persevered in. On March 10, a liniment of iodine, chloroform, and camphor was used about the joint, with friction and passive motion.

March 15.—The knee can be flexed to a right angle with the thigh. The parts about the joint are still swollen. On March 18, she reached the window, supporting herself on the way from chair to chair.

March 21.—Patient removed to Haddington in a carriage. On April 12, she is hobbling about the house without support. The knee can be folded far back on the thigh. Considerable swelling yet exists.

May 10.—Mrs. S. walks with a limp, which, it is believed, will entirely disappear in time, as very close union of the patella has taken place, and the joint is flexible and supple.

APPARATUS FOR COLLECTING MICROSCOPICAL PARTICLES FLOATING IN THE AIR.

BY C. W. DE LANNOY, M.D.

WITH the intention of devoting some time to the study of this branch of scientific research, I consulted a number of the works of renowned authors, but invari-

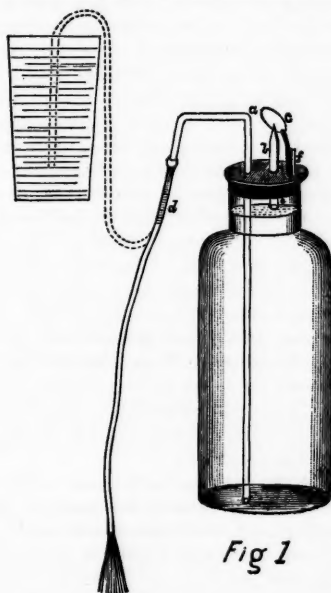


Fig 1

ably found that the agencies used in the collecting of germs and solid microscopical impurities in general consisted of expensive apparatus, including suction and pneumatic machines, flasks with air-tight

stop-cocks, etc. Not feeling disposed to purchase any of these, the following simple contrivance occurred to me as fulfilling all the requisite conditions. A wide-mouthed bottle, holding about three pints, is fitted with a good cork (Fig. 1), the latter perforated at two points of its surface to admit the passage of two glass tubes, *a* and *b*. Tube *a* is made sufficiently long to reach the bottom of the bottle, and outside the cork is bent over and down, like the discharging-tube of an ordinary siphon. To avoid the danger of breaking, its distal extremity is short, and provided with a piece of rubber tubing of necessary length (*d*). The short tube, *b*, simply passes through the cork, and no more, terminating externally in a fine point, with the smallest possible perforation. At *f* is a support for a spring clasp, which holds a thin cover-glass, such as are used by microscopists. This is held so as to impinge slightly upon the point of tube *b*. The flask, thus arranged, can be hermetically sealed with ordinary red wax. The bottle is readily filled by raising the rubber tube, *d*, placing it in an elevated reservoir of water, thus making of it a receiving instead of a discharging medium. To place the apparatus in readiness for use, the bottle is thus filled with water, and the well-cleaned cover-glass is slightly moistened with pure glycerin. It can now readily be seen that as water passes out through the tube *a*, air necessarily enters through the tube *b*, and, coming in contact with the moistened glass surface, will there deposit its impurities. If, before the bottle is quite empty, it be again filled as above described, the volume of air just admitted can be driven out through the same opening, striking the glass a second time, and thus insuring more complete filtration of the specimen examined. In many cases the particles floating in a given atmosphere are not over-abundant: it would then be well to repeat the emptying and refilling of the flask a number of times, in order that enough might be collected to warrant an opinion.

I have as yet used this apparatus in the examination of air within dwelling-houses only, and with no special object in view at the time. Greater security against breaking, where it became desirable to examine the air in wells, sewers, and cesspools, might be obtained if the pointed extremity of tube *b*, as well as the cover-glass, were

placed inside the neck of the bottle; these more delicate portions would be thus thoroughly protected.

The advantage to be claimed for the apparatus is that the impurities collected always represent a quantity existing in a known volume of air, the latter ranging from the volume of the flask to many times its cubic contents, if desired. The impurities I have found in the air of my own office consist of particles of carbon, probably from smoking, minute fragments of lint from carpets and furniture, epithelial cells, and an infinite number of undetermined impurities, which might have been recognized with the use of high magnifying powers.

CHESTER, DELAWARE COUNTY, PA.

ANOTHER TRIUMPH FOR WHISKEY OR DILUTE ALCOHOL AS AN EXTERNAL DRESSING.

BY J. L. SUESSEROTT, M.D.

MY advocacy of whiskey as an external dressing, which has now been for fifteen or twenty years,—two or three articles on the subject having appeared in your journal,—may be growing monotonous to you; but my excuse for reporting the following case is based upon the fact that so few of our leading surgeons have seen fit to adopt this article, so agreeable to the senses of touch and smell, in preference to many now in use that are not pleasant to patient, nurse, or operator. In Ashhurst's "International Encyclopædia of Surgery," on page 591, I notice the report of a remarkable recovery after a *double synchronous* amputation in the case of George —, who was admitted to the University Hospital June 4, 1879. At the conclusion of the report, Dr. Ashhurst says, "An alcoholic dressing was substituted for the oiled lint after the first forty-eight hours; the last ligature came from the leg-stump on the eighth, and the femoral ligature from the hip-wound on the twelfth day. The patient was kept in hospital until January, 1880, his wounds having then been entirely healed for about four months."

Now, my query is, why was the alcoholic dressing not used at once? If kept damp, it would have been as readily removed for renewal as oiled lint, and, being so good an antiseptic, its renewal would not have been required for even longer than forty-

eight hours. The benumbing and gently stimulating effect of the alcohol certainly favors union by first intention, and I maintain that there is no tissue or cavity of the animal economy so sensitive as to forbid its use.

On Sunday, August 20, in an altercation with a powerful negro, Peter P., also colored, received a fearful blow from a heavy base-ball bat on the right side of the head. The parietal bone of that side was crushed, the lower fragments pressing upon the brain. He was entirely unconscious, with a feeble pulse of forty per minute. After waiting for several hours, in the hope of returning consciousness and better heart's action, my son, Dr. L. F. Suesserott, in the presence of Drs. E. Brallier, John Cline, and myself, removed the depressed portion by means of the trephine. The one portion removed was almost comminuted, but a very small amount of coagulum was found beneath the bone. After all foreign substances were removed, the wound was closed, only two sutures being required to hold the apices of the flaps in contact. A compress well saturated with whiskey was applied, and the attendants were instructed to keep it saturated by pouring from the outside without removing the bandage. P. continued in his semi-comatose condition, with stertorous breathing, for two days and a half, with occasional maniacal manifestations, when he began to resist any interference with his head. On the fourth day the sutures were removed, leaving the lines of incision entirely united, without the least suppuration or any other untoward symptom. At this writing—twelve days after the injury—the patient's mind appears to be as strong as ever, and, if allowed, he would venture out of the house. It must be remembered that the soft tissues, although not very thick in that locality, were, notwithstanding, bruised and almost pulped, and these are now in a healthy condition.

I trust that those who have used this greatest of all remedies for *local* application will report their experience, and that it will come into more general use.

CHAMBERSBURG, PA., September 1, 1882.

DEATH FROM CHLOROFORM.—A lady died in England recently from inhaling chloroform to relieve a toothache. She was found dead in bed in the morning by her husband, who was a physician.—*Medical Times and Gazette*, August 5.

STUDIES ON MYXO-ANGIOMA OF THE SKIN, CLINICAL AND MICROSCOPICAL.

Read before the American Dermatological Association at its Meeting in Newport, R.I., August 30, 1882.*

BY C. HEITZMANN, M.D.,
New York.

TUMORS of the skin, termed *angioma*, or *vascular* or *erectile tumors*, are of frequent occurrence. They appear either as purplish spots, sharply marked from the neighborhood, or as dark-red elevations, sometimes distinctly pedunculated. These tumors are more or less compressible; they, in the majority of the cases, are not congenital, but appear in early childhood, remaining stationary or slowly extending over the surface of the skin. Congenital angioma is known as *navus flammeus*. It is sometimes pigmented, and is usually freely supplied with hairs.

We distinguish three varieties of angioma,—the simple, the lobular, and the cavernous angioma. In the first two forms, arterial, venous, or capillary blood-vessels may prevail, while in the third form the veins are mainly involved. In *simple angioma* we find a more or less uniform distribution of the blood-vessels, and between them, as a rule, myxomatous connective tissue, establishing the diagnosis myxo-angioma. *Lobular angioma* is composed of coils of blood-vessels, which are held together by a delicate fibrous connective tissue, between the coils there being coarse fibrous connective tissue. *Cavernous angioma* is venous in nature, and represents an imitation of the structure of the cavernous bodies of the penis. Angioma, though of a strictly benign nature, sometimes breaks open by ulceration and leads to hemorrhage, which becomes alarming only in the cavernous variety. The latter is sometimes painful in a high degree.

As therapeutical measures, excision, cauterization, vaccination, and the artificial ulceration by irritating remedies have been resorted to. Small tumors are best destroyed with smoky nitric acid transferred on the point of a hard wooden stick, which is simply saturated with the acid. Pedunculated tumors are cut off by a pair of curved scissors, the cut surface being immediately afterwards touched with liquor ferri sesquichloridi. Larger tumors need excision with the knife. Electrolysis serves

in many instances for the destruction of the blood-vessels, if the negative pole of a constant electric current is brought to bear upon the newly-formed tissue by means of numerous applications with needles. Whether the success thus obtained is permanent will be demonstrated by observation of the tumors operated upon for a number of years. The method is of too recent a date to allow any positive statements as to its value.

Myxomatous tissue, which is largely involved in the construction of myxo-angioma, appears as medullary, reticular, lymph, or adenoid tissue, and also in the form of a tissue resembling that of the thyroid body. Myxomatous tissue is present in large quantities throughout the animal body in the earliest stages of embryonic development. It also forms exclusively the tissues of transient service, such as the placenta and the umbilical cord. In the adult, myxomatous tissue is met with only in the vitreous body of the eye, in the lymph-tissue, including the layers widely spread over the so-called mucous membranes, erroneously termed adenoid tissue. It is most prevalent in the alimentary tract and in the mucosa of the uterus.

The reticular variety is the most likely to form soft, benign tumors, termed "myxoma," and this variety constitutes also the basis-substance between the blood-vessels in the myxo-angioma. Here the blood-vessels are constructed of large endothelia, and are characterized by a comparatively wide caliber. In rare cases, pigment is found in myxo-angioma, which indicates a tendency towards the formation of a malignant type, the sarcoma (myeloma), especially the melanotic myeloma. If such a change takes place, the attempts at eradication of the tumor are usually not successful.

REMARKS ON THE USE OF ERGOT IN SKIN DISEASES.

Read before the American Dermatological Association at Newport, R.I., August 31, 1882,

BY C. HEITZMANN, M.D.

DR. LE GRAND D'ENSLOW, while attending my laboratory in the spring of 1881, drew my attention to the internal administration of ergot being of advantage for the treatment of acne disseminata and rosacea. Later the doctor published his experience on this drug in the *New*

* For report of meeting, see last issue of the *Medical Times*.

York Medical Journal, and I have employed it, at his suggestion, in a number of cases, and the results I think of sufficient importance to bring before this Association. I used Squibb's fluid extract, mixed with glycerin and water in half-drachm doses, twice daily. The remedy, in my hands, never produced any evil effects whatever, and was efficacious in a number of cases.

I can corroborate fully Dr. D'Enslow's assertions in the treatment of the above-named diseases. In the majority of cases the drug proved useful in producing a rapid cure, so far as acne disseminata is concerned, especially the forms with large pustules, while in a small percentage of cases no result could be observed from its administration. In both the erythematous and vascular forms of rosacea the remedy proved to be of value in a certain number of cases, though these are less numerous than in acne. I consider the remedy an important adjuvant in the cure of the named diseases, especially if combined with proper local treatment.

I have tried the ergot in a limited number of cases of eczema and psoriasis, without any apparent result; but in erythema, urticaria, and pruritus, it seemed to have had decided effect in speedily removing the disease, though only in a certain percentage of the cases. As regards erythema, positive assertions are to be made cautiously in the face of the fact that this form of dermatitis comes and goes rapidly, and disappears sometimes without any therapeutical interference. In several cases of urticaria, lasting for months or years, ergot seemed to have an immediate curative result, not only in females, where the remedy might have acted upon the uterus, but also in males. In pruritus, ergot gave immediate relief in a certain number of cases, while in others no effect was noticed after its administration.

The remedy certainly deserves faithful trials in different skin diseases, the more so as it is, at least in the dose above mentioned, harmless. The philosophy of its action is very much in the dark. Dr. D'Enslow claims that in acne and rosacea it acts upon the arrector pili muscles of the skin, the contraction of which would assist in emptying the sebaceous masses,—a view which I consider fully legitimate.

37 WEST FORTY-FIFTH STREET, NEW YORK.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF DR. LOUIS A. DUHRING, PROFESSOR OF DISEASES OF THE SKIN.

Reported by HENRY WILE, M.D.

ACNE ROSACEA.

THE patient is a man 30 years of age, of spare frame, and poorly nourished. We see before us a typical case both of acne and of rosacea of the nose and cheeks, more, however, of rosacea than of acne being present. The acne is confined to the cheeks, while the rosacea covers the nose, especially the alæ, but extends also upon the cheeks. The former consists of papules, papulo-pustules, and a few pustules, the latter of a bright red chronic hyperæmia, with dilatation of the vessels of the skin. The disease is rather sharply defined in outline, and contrasts strongly with the neighboring healthy skin. The patient states that he has had the disease about eighteen months, during which time it has developed gradually; that for the last ten months his health has been poor, having suffered from a severe cold on his chest, and also from gonorrhœa. The patient certainly presents an unhealthy look. He has probably worked hard, been irregular or intemperate in his habits and mode of life, and as a result has provoked dyspeptic disorders, which in turn disturbed the power of assimilation. In the treatment, therefore, it is of importance to regulate the diet, mode of life, and hygiene. All heavy, fatty, and stimulating food should be avoided. Local treatment, however, is of most importance, and where the disease is obstinate we are obliged from time to time to use various remedies. One remedy, which is well known in the treatment of acne rosacea, is "Vleminkx's solution," which is prepared as follows:

R Calcis, ʒss;
Sulphuris sublimati, ʒj;
Aquæ, fʒx.

Boil down to fʒvi, and filter.

Sig.—Dilute fʒj of solution to fʒiv of water, and dab on at night.

This solution should be used diluted or full strength until scaling occurs, when it should be discontinued for a few days. After that it should be used again, gradually increasing in strength. Plain sulphur is also very valuable in one form or another, as, for example, as an ointment, in

the strength of one to two drachms to the ounce.

ACUTE DIFFUSED VESICULAR ECZEMA.

A man 35 years old, to all appearances well nourished and healthy, states that the eruption which we see first showed itself four weeks ago. It covers almost the whole surface of the skin; the back, however, seems to be the least affected portion. He further states that he has used treatment, and from appearances it may be judged that this was extreme, and by it the lesions have doubtless been aggravated. Examining the different portions of the body more closely, we find on the shoulders a characteristic patch, which consists of minute broken-down vesicles about the size of a pin-head. On other portions of the body the lesions are vesico-papular.

The patient states that he has used sulphur soap. This has undoubtedly set up an inflammatory process in addition to the original disease; for it is well known that artificial dermatitis may be produced by the persistent use of sulphur or other similar irritants on the skin.

The chief subjective symptom is itching, which is at times violent, especially when a new crop of vesicles are appearing.

If the disease is not subdued now it may go on to a more troublesome form,—eczema rubrum. The patient has been using a laxative—the bitartrate of potassium and sulphur—for the past three or four days. We will advise the continuation of this for a week or ten days longer. The remedy is in place. The patient has a good constitution, and is well able to stand slight purgation. The sulphur applications externally will of course be discontinued, and diachylon ointment (composed of equal parts of lead plaster and the best olive oil) will be used twice daily. Where the disease is so universal as here, it usually runs a more acute course than when it occupies a smaller territory. The prognosis, therefore, is not unfavorable.

ECZEMA RUBRUM INFANTILE.

A baby, 6 months old, exhibits a marked disease of the skin. According to the mother's statement, the eruption has existed three months. It is a very common disease of infants, and in this case it has affected both the face and the scalp. There is much œdema of the parts, and the inflammatory symptoms are marked. The

lesions are characterized by greenish and brownish crusts, varying in size from a quarter to a half inch in diameter. Back of the ears there is considerable swelling, with fissures not unlike those found in syphilitic disease. There is oozing of serum, and sometimes of blood, from the excoriated surfaces, which dries rapidly and forms crusts. There are, as is well known, different stages in this disease, and here we have what is known as the moist stage, or eczema madidans.

Eczema rubrum in infants is often a difficult disease to treat. After the crusts are removed, and the parts are thoroughly cleaned with soap and water, I will advise the application, twice daily, of black-wash, to be followed by an ointment made of equal parts of oxide of zinc ointment and petroleum ointment. After three or four days the lotion should be discontinued, and the treatment should then consist of the application of the ointment only. Directions must also be given as to the food and hygiene, and the condition of the digestion should be carefully noted. Tar ointment often acts well, but it must be used with discretion, as it sometimes proves to be dangerous in aggravating the symptoms.

ECTHYMA.

A girl 11 years of age, spare and pale, with average general health, though subject at times to headache and dyspeptic symptoms. She states that she has never had any skin disease before the present eruption, which appeared about six weeks ago. At first one or two lesions in the form of small flat pustules made their appearance just below the knee, then the pustules came out in crops, some of which, coalescing, formed pustular patches varying in size from one-half inch to one inch in diameter. After a few days, these patches, which were rounded or ovalish in shape, and were sharply defined and flat, began to dry and form brownish crusts. This is the usual course of development of the pustule of ecthyma. The lesions are angry-looking during the acute stage, yet they are superficial, the upper layer of the corium only being involved. It may also be noticed that where some of the lesions have healed there is a pigmented scar; but this will disappear after a time.

Ecthyma is an acute disease. It runs its course in from two to eight weeks. It usually attacks the lower extremities. The

cause of the disease is generally to be found in a low tone of the system, produced mostly by poor food, bad hygiene, overwork, etc.

The disease, as a rule, responds readily to treatment; and by keeping the cause in mind, the use of the appropriate remedies will be followed by success. The treatment consists in the administration of tonics, such as iron, cod-liver oil, quinia, etc., together with a nutritious diet, fresh air, rest, or proper exercise. As a local dressing, any simple, mild, stimulating ointment may be used, such as the following:

R Hydrargyri ammoniati, gr. xv;

Ung. zinci ox. benz., 3j. M.

Sig.—Apply twice daily.

TRANSLATIONS.

NAPHTHALINE AS AN ANTISEPTIC DRESSING.—The unfortunate results that have been reported recently from the free use of iodoform in German hospitals have led surgeons to regard it with some distrust. Dr. Fischer (*Berliner Klin. Woch.*, No. 46, 1881, and Nos. 8 and 9 for 1882) recommends *naphthaline* as an antiseptic dressing to substitute the iodoform, as possessing its advantages without its dangers. Adopting the suggestion, Dr. Anschütz used *naphthaline* in about ninety cases, the results of which he communicates in the *Centralblatt für Chirurgie* (No. 32, for August 12). It was claimed by Fischer that this remedy possesses energetic anti-bacterial and antiseptic effects, and that it is the more applicable to surgical uses because it is entirely free from any intoxicating influence. This he considered to be due perhaps mainly to its insolubility in water, and consequently in the discharges from the wound; hence it is impossible for absorption to take place from the surface of the wound. Dr. Anschütz enumerates also among the advantages the cheapness (about one mark per kilogram), and the fact that it is used in powder, and is therefore much more convenient for transportation and for use than Lister's plan of dressing wounds, for instance, in military surgery, and especially for the primary dressing in the field. It does not interfere with primary union, nor cause pain or irritation. The results obtained by Anschütz did not conform exactly with the former reported by Fischer, as in some wounds with much offensive se-

cretion the smell was not entirely prevented by the dressing, and in some cases the powdered *naphthaline* formed a crust which retained the discharges; in others some blood was mixed with the secretion, as if the crystals of *naphthaline* had injured the granulations. Further experiments and observations are needed to establish finally the value of this agent in surgery.

FAT EMBOLISM AFTER FRACTURE.—From a careful study of the cases, and a review of the literature of fat embolism, Dr. A. Minich (*Lo Sperimentale*, 1882, No. 3) has been led to consider that the condition is much more frequent than has been supposed. He concludes as follows: (1) In every fracture there is more or less fat embolism, though in children it may be wanting or very insignificant, on account of the small amount of fat contained in their bones. (2) Very seldom is fat embolism by itself the cause of death or alarming symptoms. (3) Non-infectious fat gives rise neither to pyæmia nor inflammation. (4) Death depends principally upon the suspension of function of the nervous centres, which is reduced by ischæmia. (5) The presence of pure or emulsified fat in the urine occurs chiefly in severe and dangerous cases of embolism. It may often appear without grave symptoms. (6) The occurrence of death from fat embolism after fracture must be borne in mind. (7) The therapy is merely, thus far, symptomatic and of very little effect in preventing a fatal result.

BORACIC ACID POMADE.—Champonnière gives the following formula:

R Acid. borac., gr. vi;

Vaseline, gr. xxx. M.

The acid to be very finely powdered and directly incorporated with the vaseline. To this may be added the balsam of Peru, ℥ viij (gr. 50), to give it an agreeable odor.

The ointment being antiseptic and non-irritating, it may be used for excoriations, superficial wounds, eczema, intertrigo, and especially the erythema of the buttocks of infants. In fetid perspiration of the feet this pomade may be applied, after bathing, with excellent effect.—*La France Médicale*, No. 20.

"WHAT is the action of disinfectants?" was asked of a medical student.

"They smell so bad that people open the door and fresh air gets in," was the reply.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, SEPTEMBER 23, 1882.

EDITORIAL.

KANE.

AT the highest point attained by the Philadelphia and Erie Railroad in crossing the Alleghany Mountains, ninety-five miles from Erie, is situated a small but thriving settlement named in honor of Dr. Elisha Kent Kane, the Arctic explorer, by his brother Major-General Thomas L. Kane, who has large land-interests in this portion of Pennsylvania. Within a few years Kane has acquired some reputation as a health-resort during the summer with physicians in Philadelphia, Harrisburg, Erie, Cleveland, and other cities; and, as they are in the habit of sending patients to this place, its peculiar features deserve to be studied.

The hotel, the Thomson House, is situated upon an elevation in the midst of a natural park, the enclosure containing between six and seven acres of woodland. The railroad-station is in the immediate vicinity, and the trains stop in front of the hotel for the accommodation of guests. The house presents quite a striking appearance from the railroad, both from its surroundings and its style of building. Constructed, as it has been, with a view to comfort and convenience, and not on the model of the sea-side hotels, it has remarkably large rooms, with high ceilings, wide halls, and large porches. As it has only three sleeping-floors, and as so much space is devoted to the rooms, it results that the total number of rooms is small, and a hundred guests is about its full capacity. The house is well furnished, the table good, and the service first-class. There is no bar, but there is an abundance of exhilarating fresh air to be had on the porch, which

cheers but not inebriates. The settlement is situated upon a large plateau known as the "Big Level," or "Clarion Summit." It has an elevation of over two thousand feet above tide. The mountain-top is covered with primal forest, principally consisting of hemlock and beech. The air is dry and pure, and there is an abundance of clear spring-water that is supplied to the hotel, which is unusually free from mineral matter and has no organic impurity. A sulphur spring also is in the neighborhood which might be utilized. There is no poison-oak to render a walk in the woods dangerous, and there are no snakes to fear; especially it should be stated that there are no rattlesnakes. The scenery is that of a great lumber region,—wild, and in many places strikingly beautiful. The woods are dry and open, massive rocks are found that excite awe and admiration, while the mountain abounds in trout-streams that have not been fished out, and there is gunning for those who can indulge in the sport. The roads are good, and riding and driving are easily enjoyed at moderate expense. Being near the oil-regions, there are abundant deposits of gas, and natural gas-wells are common. The famous spouting-well of Wilcox is only four miles away, and is well known as one of the great objects of interest of this region.

As a health-resort, Kane is becoming known as a hay-fever station, and each year more visit the locality in order to escape their annual infliction; and they speak very highly of the place. The pure, dry mountain-air stimulates nutrition, so that a rapid gain in weight is commonly observed. Convalescents here rapidly recover. Chronic pulmonary troubles, especially of a catarrhal character, are greatly benefited, and gastric indigestion is also rapidly relieved. Contrary to general opinion, there is no suitable accommodation for invalids yet at Kane, as the hotel is unable even to accept all the applications from the well; but a hospital will soon be

established through the liberality of General Kane, who has already endowed it. Increased hotel accommodation also is needed, and will soon be furnished, it is believed, by the erection of a hotel at Mount Jewett, near the Kinzua iron bridge, which is one of the wonders of the world, —the highest bridge on trestle-work ever constructed. It is on the line of an extension from the New York and Erie road, now nearly completed. This new connection will bring Kane into increased notice, will make it more accessible, and will greatly aid in the development of what promises to be a great, if not the greatest, health-resort in Pennsylvania.

ETHER VERSUS CHLOROFORM.

IN an editorial in the last issue of the *Virginia Medical Monthly*, the following quotation is made from an editorial in this paper, and characterized as intemperate language: "The dangers which surround chloroform have been too frequently written about and have been too often tragically exemplified to need further comment. He who still persists in the habitual use of chloroform seems to us beyond the reach of argument or human speech. We let him alone."

Surgeons who still use chloroform will no doubt agree with our Southern *confrère*, but, in all soberness, to us the language seems to have its appropriateness proved by the very editorial that condemns it. Respect for authority, but especially long habit, certainly will place a man in such a position that he cannot or will not see the force of argument against the cause he advocates. Now, the argument is not, as is represented in the article alluded to, "an assumption of the safety of ether," but it is that ether is far less dangerous than chloroform, and that without good reason no man has a right to expose life to a risk which is so very appreciable. The latest full collection of the cases of anæsthetic

deaths (Lyman's, 1881) gives accounts of three hundred and sixty-eight cases of death from chloroform, whilst the number of the ether deaths is twenty-seven. Three hundred and sixty-eight *versus* twenty-seven; this is the kernel of the debate. A big cemetery full of dead, a little corner of a graveyard.

Another proof of the hopelessness of reasoning with the advocates of chloroform is shown by the following quotation from the editorial in the *Virginia Medical Monthly*: "Only recently we get an account from England, by Mr. Lawson Tait, of a death from ether. The patient was a lady, who was operated upon for abdominal tumor. The ether used was 'absolute anhydrous methylated sulphurous ether, .717.'" Now, methylated sulphurous ether is not ether,—i.e., oxide of ethyl,—but a distinct chemical compound, and the whole case is foreign to the discussion.

LEADING ARTICLES.

THE CLINIC ON SYPHILIS AND SKIN DISEASES AT THE ROYAL CHARITÉ HOSPITAL, BERLIN.

THE clinic on syphilis and skin diseases, held during the regular sessions at the Royal Charité Hospital, is under the efficient direction of Prof. Dr. G. Lewin. In the literature Prof. Lewin is regarded more as one of the leading syphilographers, but as a dermatologist he also ranks high as an authority on the Continent. He is the oldest professor in active service in his branch on the Continent, and has thus far identified himself with the interests of the Royal Charité for the past twenty years.

The Charité is evidently a German institution, embodying in it that spirit of monopoly and concentration which has so characterized the politics of the German nation for the last fifteen years. With the exception of a few small private sectarian hospitals, the Royal Charité is the great asylum in which all the sick of Berlin seek refuge. The number of patients annually treated here in all departments is

about 17,500. Out of this number about 6000, or 33 per cent. of all the sick at the Charité, come under treatment in the division for syphilis and skin diseases. The explanation for this great number is the fact that all the syphilitic cases *must* go to the Charité for treatment. The regulations in regard to prostitution are peculiar. There are no public houses of prostitution allowed in the city, but the number of prostitutes who ply their trade in the coffee-houses, restaurants, and upon the public streets especially, is simply enormous. They are for the most part under police surveillance, and are compelled to present themselves for examination twice a week before certain medical officers appointed for the purpose. These women are all registered, and if they fail to appear they are arrested and punished. As soon as one becomes infected with syphilis, or presents suspicious symptoms, she is immediately sent to the Charité and kept there secluded until pronounced cured by the directing physician. Thus, out of this army of *puella publica*, many are daily sent to the hospital from all quarters of the great capital. The advantage of such an arrangement is to furnish complete histories of all the cases, by which the number and character of the relapses, also the influence of treatment, can be accurately determined, analyzed, and compared. This is not possible in other large cities, like Vienna, Paris, or London, because in these cities the prostitutes go indiscriminately from one hospital to another.

Under the system followed out in Berlin it is rendered possible to figure out the number and character of relapses which appear after the different modes of anti-syphilitic treatment. This has been done, and a comparison of the efficacy of the different methods of treatment has been instituted.

The *subcutaneous sublimate injection* was discovered and practically applied as a method of anti-syphilitic treatment by Prof. Lewin in 1865, and up to the present time has been used by him on upwards of 50,000 patients. The result of the treatment is as follows. Whereas after the *sweat cure* (Zittmann) 90 per cent. of all patients had relapses, and after the *inunction cure* 80 to 85 per cent., after the *subcutaneous sublimate injection cure* only from 30 to 35 per cent.

had relapses. In addition, the relapses after the last-mentioned cure are benign, so that at the present time there is not one bad case of relapse in the Charité Hospital. The advantage of the method is the safety with which it can be applied. Abscesses at the point of injection never occur, and the pain is insignificant. The gluteal region is the part of the body chosen for the injection.

The method of instruction at the clinic is, in a general way, as follows. First, a history of the disease is given, together with its different stages of development; then the symptoms in their order,—subjective and objective; then the pathological anatomy, macroscopical and microscopical appearances, with an exhibition of microscopical preparation from time to time; then follow the diagnosis, differential diagnosis, treatment, and prognosis.

Taking advantage of the abundance of material, both in syphilis and skin diseases, Prof. Lewin brings before the students cases, syphilitic and non-syphilitic, presenting lesions which bear great resemblance to one another. The points of resemblance and difference are sharply brought out, and in this way good exercise is given in the most important matter of differential diagnosis. Another valuable feature of his course of instruction is the exhibition of a collection of graphic illustrations. They are, for the most part, paintings, life-size, executed in oil colors, and by competent artists. At the present time the collection consists of 150 charts, averaging one and a half metres long by one metre wide. On these charts there are, on the average, about ten different illustrations, making altogether about 1500. The principle which underlies the execution of these paintings is as follows:

(a) Macroscopically,—a life-size representation of the whole person, as well as the individual parts, where the lesions were more pronounced.

(b) Microscopically,—a representation of microscopical appearances, taken from sections of the lesions, for the most part executed by the professor himself.

(c) Differential diagnosis,—a grouping side by side of similar disease-processes, viz., of testis tuberculosis, sarcoma, carcinoma, etc.

By the way, there were six charts which seemed to me to be especially interesting and instructive on account of the com-

pleteness and clearness with which the details of the subject were represented. These charts represented the development of the testes, the complete anatomy of the normal mature testis, and, lastly, the different disease-processes which can occur in the testes. On one chart was to be seen the development of the Wolffian bodies up to the period where the differentiation occurs which determines the sex of the fœtus. It could also be seen how certain tumors and cysts may develop from residual embryonic material, and how the hydatids of Morgagni were developed. On other charts the normal anatomy of the testis was represented by the side of disease-processes which may occur in gonorrhœa, syphilis, tuberculosis, scrofulosis, and in sarcomatous and carcinomatous degeneration.

There was still another chart which excited my interest: it represented the development of the cysticercus and echinococcus. From the first it was shown how this parasite gives rise to certain tumors of the skin, which, previous to the publication of an article on the subject in the *Charité Annalen*, 1877, by Prof. Lewin, were not well understood.

When the patients are presented as exhibiting a certain stage in the process of some syphilitic or skin disease, these charts are brought in in order to furnish a survey over the whole process, also to demonstrate the microscopical appearances.

In addition to the advantages which the student enjoys from such a mode of instruction, he is offered the opportunity, occasionally, of performing minor operations.

HENRY WILE, M.D.

TYPHO-MALARIAL FEVER.

WITHIN the past week there have been brought to my notice ten or twelve cases of a fever closely resembling that of which so much was seen during the war, and which was then described under the names of *miasmatic typhoid* and *typho-malarial* fever.

By this it was meant to indicate not a new, special disease, but that the ordinary type of typhoid fever was much modified by the poison of malarial fever to which the patient had been largely exposed.

The cases seen during the past week were, many of them, persons who had just returned from a popular watering-place. In one family four were the subjects of the disease, in another three, while the others were isolated cases. Another family, four of whom were ill at the same sea-side, were reported to me. In all these cases the malarial-fever symptoms very much masked or modified those of ordinary typhoid fever, which could only be positively recognized by the *red spot*. There was less disturbance of mind, less dryness, or tendency to it, of the tongue,—less than the usual tympanites; there was looseness of the bowels, but not much diarrhœa. Indeed, the symptoms in some of the cases were so mild that it was with difficulty the patient could be induced to keep his bed after the first fortnight of his illness. But with these mild symptoms the thermometer showed a marked rise in the temperature, and there was a very remarkable weakness of the heart's action, altogether disproportionate in its gravity to the other symptoms. In two cases there were laryngeal complications, so that the patient's voice was scarcely above a whisper; in one there was intercurrent pneumonia, and in others there were bronchitic râles.

These cases required no unusual medication. The free exhibition of quinia and the usual treatment of typhoid fever were generally followed by satisfactory results; but what was of especial importance was the necessity of early recognizing the typhoid-fever character of the disease, and the absolute necessity that the patient should keep the recumbent posture even long after this seemed necessary to the patient himself.

JAMES J. LEVICK.

REVIEWS AND BOOK NOTICES.

THE DISEASES OF THE SPINAL CORD. By BYROM BRAMWELL, M.D. Edinburgh, Mac-lachlan & Stewart, 1882.

We have read this volume carefully almost from beginning to end, and can honestly characterize it as a most excellent treatise, clear and concise, full and explicit. We have nothing but praise for it. The only doubt we feel is as to whether, in the hospital or sick-room, cases always can be marshalled into the hard and fast lines laid down in this treatise. We have seen cases of spinal diseases which could not be put in any of the

sections of Dr. Bramwell, and only wish post-mortem examinations had afforded us the means of discovering what they were. The author evidently has seen more of chronic than of very acute diseases of the cord. No mention is made of there being such an affection as acute congestion of the cord, with symptoms of ascending paralysis, and at the autopsy great fullness of the extra-medullary venous trunks and serous exudation; yet we are sure such disease exists. Meningeal spinal hemorrhage is said to be excessively rare; but, unless our experience be very exceptional, in this country it is not so uncommon, although intra-spinal hemorrhage is. One point not noticed in Dr. Bramwell's excellent diagnostic table is that whereas in true spinal hemorrhage there is a very abrupt ending to the symptoms, when the clot is outside of the cord there is a wide zone between the anæsthetic and normal skin. Dr. Bramwell is the perhaps correct that, as a general rule, the paralytic symptoms are less intense in extra-intra-spinal apoplexy; but if the blood be poured out freely, the palsy may be absolute and yet no blood be in the cord.

CEREBRAL HYPERÆMIA: DOES IT EXIST?

By C. F. BUCKLEY, M.D. New York, G. P. Putnam's Sons, 1882.

We have looked over this book,—not read it, for reasons which we will try to make clear. The author begins by stating that it is a review or attack upon the work of Dr. Hammond entitled "Cerebral Hyperæmia," affirming that "his [Dr. Hammond's] is probably the most prominent name in the medical literature of this country at the present time." Thanks to the wide circulation of the *New York Herald*, and the sensation-affording possibilities of hydrophobia, forty-days' fast, etc., Dr. Hammond's name is prominent enough; but the only reason that we can assign for Dr. C. F. Buckley's believing it worth while to try to enlighten the American medical public concerning Dr. Hammond is that he (Dr. Buckley) has not been long in this country. The American medical public now know Dr. Hammond. He has fairly settled to his level, in their estimation. We have read "Cerebral Hyperæmia," appreciate the stuff it is made of, share the general medical opinion concerning its much-advertised author, and hence are not willing to waste time reading concerning it or him.

CAROTID COMPRESSION AND BRAIN-REST.

By I. LEONARD CORNING, M.D. New York, Anson D. F. Randolph & Co.

In this small brochure, Dr. Corning describes the results obtained by him in epilepsy, congestive headaches, etc., by pressure upon the carotids. He claims a great deal for the method of treatment, and describes two instruments which he has invented,—one for producing temporary pressure, the other more

permanent pressure. It is possible that in some cases it may be advantageous to affect the blood-supply of the brain in this way, but future study can alone determine the value of Dr. Corning's suggestions.

MENTAL PATHOLOGY AND THERAPEUTICS.

By W. GRIESINGER, M.D. Wm. Wood & Co., New York.

It is hardly worth while now to review a book which for a third of a century has been before the medical public. The present edition is seventeen years old. In Wm. Wood & Co.'s next-year series we hope to see a treatise upon the practice of medicine, embracing all the latest discoveries and improvements, by Noah, M.D., composed during his enforced tarriance upon the waters, and thoroughly revised upon Mount Ararat.

THE PHILOSOPHY OF INSANITY. By HENRY HOWARD, M.R.C.S.L. Dawson Brothers, Montreal, 1882.

Perhaps two short extracts will show the scope of this book of one hundred and thirty pages, mostly not worth reading: "From these facts we have also another proof that life is not in the blood, . . . but in the sensory nerves that originate in the skin." "I will now give such positive proofs as I have to offer in support of my theory that insanity is a physical disease, caused by a pathological defect in the sensory nerves and the organ of consciousness, or of the sensory nerves or organ of consciousness."

GLEANINGS FROM EXCHANGES.

J. MILNER FOTHERGILL ON MITRAL STENOSIS IN THE GOUTY HEART. — In a recent communication to the *Lancet*, Dr. Fothergill says that in the gouty heart "there is a permanent high blood-pressure in the arteries, leading to hypertrophy of the left ventricle, with subsequent hardening of the arteries,—the cardio-vascular changes which constitute the first stage of granular kidney, so ably described by Dr. Mahomed in his recent thesis, 'Chronic Bright's Disease without Albuminuria.' The hypertrophied ventricle contracts with vigor, so overcoming the resistance offered by full arteries to the cardiac systole and forcing the blood into the aorta, which on its recoil closes the aortic valves with a loud sound indicative of forcible closure; and this forcible closure frequently sets up valvulitis, with subsequent mutilation of the aortic valves. This association of aortic disease with the gouty heart is now well recognized. But the powerful contraction of the hypertrophied left ventricle causes also forcible closure of the mitral valves; they have to sustain a strain equal to the force required to overcome the resistance of the full aorta, and this strain tells upon them in time, leading to

a slow sclerosing endocarditis. Such valvulitis may give either stenosis or insufficiency of the mitral valve. When the free edges become puckered and contracted, then insufficiency with regurgitation follows; when the valve-curtains are soldered together by a slow inflammatory growth extending from the attachments of the valves, then stenosis with obstruction is the result. Now, whatever the form assumed by the valvulitis, the features of the gouty heart will remain to the end, even when all the phenomena of advanced mitral disease are developed and implanted thereon. The aspect is never that of simple primary mitral stenosis; nor does the interest centre round the murmur evoked by the morbid process, but attaches itself rather to the associated general condition of the vascular system.

"A certain amount of injury to, and deformation of, the valves has gone on before it is sufficient to produce a murmur. But there may be the rational symptoms of a mitral lesion before the ominous murmur is set up. It may be possible to 'suspect' a mitral valvulitis before the telltale murmur can be heard; there is, indeed, a premurmur stage in all probability. It is no part of the design of the writer here to discuss this early stage, but to confine himself to the consideration of mitral stenosis,—*i.e.*, of a stage so advanced that it carries with it a murmur indicative of the character of the injury done. What are the features of this form of mitral stenosis?

"The patient is elderly; has a more or less pronounced senile aspect. The complaint is that the power to undergo exertion is impaired. There is shortness of breath upon effort. There may be nothing more. The pulse may be feeble and rapid, but there is nothing else about it, nothing characteristic. But on auscultating the heart over a very limited area, at or near the right apex, a tiny 'whiff' can be caught. Only over a small spot; move the stethoscope ever so little and it is apt to be lost; certainly lost if the stethoscope be distinctly moved. Here the presence of a murmur is significant, and unmistakable enough; at least in the majority of cases. But there is also a strong heart very commonly, and a fairly full artery,—*i.e.*, there are the associations of a gouty heart along with the mitral stenosis. Usually the nature of the cause of the murmur is clear and patent, and not a matter for reasonable doubt, as in the case given above. Here is a distinct explanation of the failure of power complained of. Or there may be a more advanced condition attained before the case came under notice, and the patient is confined to bed with or without some positive patch of pulmonary congestion. But there are the significant murmurs, the rational features of mitral disease, linked with the cardiovascular changes of the gouty heart, or granular kidney, as the case may be. The

diagnosis bears on the prognosis and the treatment, especially as to the administration of digitalis. Here there is not an old-standing limited injury to valves, as static and non-progressive as the scar of a burn, limiting the patient's powers, but possessing no tendency to further advance. There is a contracting or sclerosing valvulitis afoot, which tends to steadily go on from bad to worse, because the mitral valve has to bear the strain put upon it by an hypertrophied left ventricle. It is a progressive form of valvulitis. Certainly: but, granting that, at what rate is it progressing? '*Quien sabe!*' as the Spanish girl said when they asked her who was the father of her child' (Kingsley). One would like to know; but how can one get to know? Only, in the language of Oliver Wendell Holmes, by getting 'an arc big enough to determine the size of a circle,'—*i.e.*, getting a period of observation long enough to calculate the rate of progress. This may entail personal observation, or may be fairly made out by the history of the case. In one case a definite date can be made out, since which there has been such a falling-off in the patient as reveals pretty plainly the time when the lesion began to tell upon the organism. In another case there will be no data pointing to any special time when the health was obviously impaired. The patient is not very well, feels weak and unequal to exertion, and is scant of breath; and on examination of the chest the murmur of mitral stenosis is audible. Such a case presented itself to me in June, 1880.

"In some other cases the inactivity of the valvulitis seems about the same; but in others, again, the progress has been steadily, if not rapidly, downwards. In one case there are violent paroxysms of angina pectoris present.

"As to the treatment of these cases, the prevention of the production of uric acid by an appropriate dietary and the use of hepatic stimulants, its solution by antilithic alkalies, are measures about whose adoption there can be no question. To keep the blood-pressure in the arteries as low as possible means lessening the strain on the diseased mitral valves on each ventricular systole; and this is attained by reducing the amount of albuminoid waste in the blood, or dissolving it, and so letting it escape by the water emunctories. So far so good. But how about the administration of digitalis? To increase the vigor of the ventricular contractions means increase of the strain on the valves. Certainly; and therefore grave and valid doubts may honestly be entertained about the wisdom of giving digitalis and iron, in a routine manner, in all such cases of mitral valvulitis. When the heart is fairly vigorous, and there are none of the rational symptoms of mitral mischief present, then, probably, it is well to withhold the digitalis, and to be content with

an appropriate dietary and regimen. But when there are evidences of cardiac failure, then, in all probability, it is well to give the digitalis; albeit in doing so the ventricle does strike harder, and so tax more the mitral valves. Here the ventricle is striking feebly, and the advantage of improving the heart's vigor is not more than counterbalanced by further strain put on the sclerosing valves. In practice each case must be decided by its own indications; and the indications will vary at times in the same case. Nor is it possible to lay down any rules of thumb for the administration of digitalis. The practitioner must weigh carefully the indications for its adoption or the withholding of it in each case. It is not necessary or desirable to give it merely because there is a mitral murmur present; as Rosenstein puts it, 'Digitalis helps the heart to pump the blood out of the veins into the arteries,' and the fulness of the veins and the comparatively empty state of the arteries are the indications for its exhibition; no matter what the murmur, or whether there be a murmur or not. Probably when the rational symptoms of mitral mischief are present it will always relieve them. Whether at times such relief is antagonistic or prejudicial to the ultimate interests of the case, and therefore it is better to withhold digitalis, is a matter for the exercise of private judgment on the part of the medical adviser. This is certain, the indications for digitalis in such mitral stenosis (or insufficiency, too, for that matter) are not so unmistakable as is the case in mitral valvulitis in the young, where a distinct injury, be the same more or less, has been wrought; but where there is no tendency in the valves to further mutilation, the distorting process being over and done with, the said injury crippling the organism and leading to death from the disturbance so wrought in the circulation, here digitalis can scarcely do any harm; but the same cannot be said of the sclerosing valvulitis of the gouty heart."—*Lancet*, August 5, 1882.

A CASE OF HYDROPHOBIA TREATED SUCCESSFULLY WITH ACONITE.—In the *Lancet* for August 12, Mr. Cullimore reports the following:

A boy, aged 10 years, presented himself at the out-patient department of the North-West London Hospital, complaining of pain over the diaphragm and abdomen, with gasping and spasmodic breathing. Some three weeks before he was bitten on the finger by a supposed rabid dog; but, as the wound after cauterization healed well, and as he continued in his usual health, no notice was taken of him till two days before he was taken to the hospital. At this time, however, owing to the wound becoming painful and angry-looking, and symptoms such as restlessness, anxiety, fidgetiness, and sleeplessness having commenced to trouble him, relief was sought. The boy was admitted an in-patient on No-

vember 13, 1881, as, in addition to the symptoms just detailed, there was a peculiar and suspicious wildness of expression, with choreic-like twitches of the face, and a temperature of 101° F. These symptoms, taken in their entirety, led me to so strongly suspect the existence of the melancholic stage of hydrophobia that I fully expected the immediate onset of the fully-developed symptoms of this dreaded disease. The tongue was furred and cracked in the centre, but red at the tip and edges, and the pulse presented nothing abnormal.

The treatment, after placing the patient in a quiet and secluded corner, consisted of a dietary of milk thickened with arrow-root and beef, with the following mixture: one minim of the tincture of aconite, six grains of bromide of potassium, six minims of the tincture of cinchona, to half an ounce of water, to be taken every half-hour for twelve doses, and then three times a day.

January 16: Passed a restless night, attended with occasional delirium till towards morning, when very free perspiration was followed by sleep. The sister in charge states positively that he refused to take fluids during the night, and, on testing him myself, he took water with reluctance, swallowing it, however, with about the same difficulty one might expect in a sharp attack of tonsillitis. So much was I struck with this symptom that I at once expected some severe throat-inflammation; but, on examination, no swelling whatever was found,—nothing, in fact, beyond a slight redness of the parts about the root of the tongue. It is necessary to say that there was not the same difficulty with the beef-tea and arrow-root, to which thickened fluids his drink was restricted, as I did not think it advisable again to try him with water, lest it might aggravate his complaint. 17th: Continues to complain of the epigastric pain and depression, to which is added severe frontal headache, and is much in the same state as yesterday. He takes beef-tea, and has no convulsive paroxysm beyond an occasional twitch. 19th: The patient has lost his wildness of expression, but appears sleepy and drowsy, owing probably to the effect of the medicine. The wound does not heal well. 25th: Has made good progress since last observation; all symptoms clearing up, with the exception of the abdominal sinking, and the state of the wound, which shows little inclination to cicatrize. The aconite to be omitted, and two grains of quinine to be taken three times a day. 27th: The temperature, which for some time was normal, rose to 101° F.; but from this date till December 6, 1882, it gradually declined. Bowels rather constipated throughout. He was then discharged; temperature normal; wound not well cicatrized.

Remarks.—This case presents two problems for solution. First, was it a case of hydrophobia, looking at this affection as the result

of a specific poison, and not, as some few still consider it, a complex neurosis acting on susceptible organizations? Second, looking at it as an example of the incipient stage of specific disease, did the remedies employed prevent its further and fatal development? The history of the bite and its seat, the period of incubation, and the age of the patient (nine out of thirty-six persons attacked, according to Dr. Dolan, being about this age), together with the renewed pain and soreness in the wound, would render a diagnosis of rabies probable. Added to which, the convulsive twitches, the look of alarm, the fidgetiness, the spasmodic breathing, and the reluctance, difficulty, and refusal to take water, though not insurmountable on the day after admission, and of short duration, appear to me to afford evidence sufficient to render certain what the prodromata rendered probable. Moreover, the absence of other causes, though carefully looked for, corroborates this view of the case. It might be alleged that the difficulty with fluids was of too transient a character to be compatible with rabies, and I grant I was very agreeably and extremely surprised by its speedy subsidence. Yet, on the other hand, many fatal cases are recorded where there was no hydrophobia (using the word etymologically) and no difficulty of swallowing fluids, while it should also be borne in mind that fluid dysphagia is a symptom of other affections, and that there is at least one case on record where a patient suffering from laryngitis was violently and fatally treated for rabies. Again, if not rabies, what was the disease? Tetanus it certainly was not, for I have seen so many cases of this disease in India that I can positively say the symptoms are very different. Besides, the onset of traumatic tetanus is rarely delayed beyond the tenth day, and never for three weeks. Against the symptoms being caused by serious apprehension and dread of impending evil are the age of the patient and the increase of temperature of the body. The second question to be answered has reference to the value of the medicine. Now, rabies has two stages, exclusive of the period of incubation. One corresponds to the circulation of the poison in the blood, and is reflected by the malaise, fidgetiness, nervous breathing, changes in the wound, and, in this case at all events, by the pyrexia. The other is due to a later pathological action of the poisoned blood setting up irritation of the medulla and the nuclei of the bulbar nerves, and manifests itself by the fatal spasmodic convulsions of the pharynx and air-passages. Therefore the remedy should be selected with a double object; first, to eliminate the poison from the blood, and, second, to counteract, control, or relieve the congestion of the nerve-centres before referred to. Aconite, as I will now endeavor to show, recommends itself to our consideration as fulfilling both requirements in a manner un-

equalled by any other drug in our possession, or by any that has hitherto been tried as a remedy for hydrophobia. Thus, by the profuse perspiration which it causes, it eliminates, in common with jaborandi, the morbid poison from the blood. It is true, it does not act as a sialagogue, but no superior benefits can be claimed for jaborandi on this account; as in the olden days mercury to salivation was frequently tried, not only with no good result, but often with an unnecessarily disagreeable one. Thus, it is the sweating action of aconite, as it is of jaborandi, that is beneficial in the first stage. We know that many bitten on exposed parts by dogs undeniably had never catch the disease, and we know also that the poison may remain permanently latent, or latent till called into activity by some exciting cause, generally of a moral nature. Therefore it is easy to go a step further and conceive how in certain mild cases, but when the latent poison has yet become sensible, it may be removed by such remedial agents as the Turkish bath, aconite, and jaborandi. But the rôle of aconite does not end here, while that of jaborandi and the vapor-bath may be said to do so. For this drug, as a vascular depressant, slows the circulation, and thus reduces the interchange between the morbid blood and those tissues on whose irritation depend the fatal manifestations of the disease, "bleeding"—as Dr. Fothergill expresses it, I think—"the blood in its own vessels." And even when this irritation has occurred, aconite promptly given is not only the best drug to control it, but, by its great power of subduing peripheral hyperæsthesia, it will reduce to a minimum the effect of those secondary external causes which often bring about the paroxysms and give them their fatal virulence. To substantiate what I have just said, I cannot do better than quote a few examples from Dr. Ringer's text-book. He says that one drop of tincture of aconite given at bedtime quiets the distressing fidgets of men and women, and causes calm and refreshing sleep. The import of this is obvious when we remember that fidgetiness is one of the commonest and earliest symptoms of rabies. The same author says it soothes the nervous system, and favors sleep by producing free perspiration, which perspiration may continue for days, and that it cuts short the inflammation, not by removing its products, but, by controlling the inflammation, it will prevent their formation. In its action on the nervous system Liégeois and Hottot state that it paralyzes first the perceptive centres, afterwards their terminations, and, lastly, the trunks of the sensory nerves. Thus I am justified in saying that if jaborandi is useful in the first stage of hydrophobia, and wourari by its soporific and paralyzing effect in the second, aconite, combining in itself the properties of those agents so highly spoken of, is beneficial in both. It might, of course, be

combined with one or the other, and should also be given as a prophylactic, as indicated by its sedative action, to all who may unfortunately be bitten by animals about whose condition there is the slightest suspicion.

CASE OF EXCISION OF THE TONGUE, FOLLOWED BY TRACHEOTOMY AND SUBSEQUENT GASTROSTOMY—RECOVERY.—Samuel S., aged 40, a cabinet-maker, was admitted to the Manchester Royal Infirmary on January 7, 1882. No feature in his previous or family history could be elicited which had any bearing on the disease for which he sought relief. He stated that nine months previously he first noticed a pricking sensation in the neighborhood of the right tonsil, and that shortly afterwards he experienced pain on the same side of the head, as though he had a combined attack of face- and ear-ache. He had a tooth, which he believed to be the cause of his suffering, drawn, without any benefit. Shortly after this, he discovered a small hard nodule situated on the middle third of the right side of the tongue, corresponding to the situation of the tooth which had been extracted.

On examining the mouth after admission, the right posterior half of the tongue was found infiltrated with a hard mass extending down into the floor of the mouth, and upwards on to the dorsum. The surface of the tongue was not ulcerated, but one side was bound down to the floor of the mouth. The fauces from the soft palate to behind the posterior pillars were deeply excavated, the edges of the sore being hard, ragged, and infiltrated. There was no perceptible glandular enlargement. He complained of lancinating pains in the right external auditory meatus, extending to the right side of his head. A significant depressed cicatrix was noticed over the sternum, and also a scar, with a serpiginous outline, of the size of a florin, in the third intercostal space, suggestive of syphilitic origin,—a suspicion, however, not substantiated by any other evidence. The voice was not affected, and he could swallow without much difficulty. He derived great relief from taking liberal doses of Battey's solution at bedtime. From January 17 to February 16 he was treated as an out-patient, his condition being then regarded as beyond surgical treatment. He was again admitted, however, in consequence of his increased sufferings, and his irresistible pleadings that something might be done to relieve his intolerable condition. On February 18 the entire tongue was excised close to the base with scissors, by the method advocated by Mr. Whitehead. During the operation the lingual arteries spurted for a moment, but were easily secured and twisted. It was remarked that during the administration of chloroform, respiration was interrupted whenever the tongue was drawn towards the left side, and that air entered the lungs more freely when the tongue was dragged well over to the right. This was explained by the right

side of the pharynx being more completely blocked by the growth than the left side, so that when the tongue was pulled to the left it entirely obliterated the remainder of the pharyngeal aperture. This obstruction was so marked that it suggested the possibility of imminent suffocation should any oedema, extension of the morbid growth, or inflammatory thickening follow the operation. Consequently, on the following day, tracheotomy was performed about one inch below the cricoid cartilage. A silver tube was worn for the first few days, after which, on February 25, an india-rubber tube was substituted. The patient expressed himself relieved, slept well the night after the operation, and did not complain of pain the morning following. He was fed entirely for the first four days by enemata, each enema consisting of four ounces of beef-jelly and one egg, administered every four hours. His bed was surrounded by a tracheotomy tent, and steam was kept going night and day until February 27.

March 8. The first stage of the operation of gastrostomy was performed, chloroform being administered through the tracheal tube. The operation consisted in making an oblique incision two and a half inches long, parallel to the left costal margin, commencing opposite to the ninth rib. The various structures were divided down to the peritoneum, which was opened. The stomach was easily brought out of the wound, and attached to the margin of the skin by about a dozen carbolized sutures, the stitches being passed only through the serous and part of the muscular coat of the stomach. This stage of the operation was conducted under strict antiseptic precautions. The patient was again fed by enemata, and no other food was given for five days. Ice, however, was permitted, and freely indulged in by the patient. No gastric inconvenience whatever resulted from the operation, and the wound was left undisturbed for three days. The first time the wound was dressed, the exposed surface of the stomach was found to be covered by a coating of lymph, and the edges of the wound looking healthy. On the fourth day the temperature had risen to 104°, but without the patient complaining of any special inconvenience beyond a troublesome cough, which, together with the elevation of temperature, was evidently caused by a badly-fitting tracheotomy tube, that for some reason had partially collapsed. After this had been changed for a more suitable one, the coughing speedily subsided, and the temperature became normal. When the wound was dressed on the fifth day it looked very clean. Feeding by enemata was continued for twelve days, although small quantities of milk were allowed to be swallowed from the fifth day.

On March 19 the stomach was opened by the introduction, in a direction obliquely upwards, of a trocar about the size of a No. 3

catheter. After withdrawing the trocar and leaving the canula, a No. 2 gum-elastic English catheter was introduced through the canula into the stomach, and the canula was withdrawn, leaving the catheter in the wound. The catheter was retained in the wound, but the gastric fistula was not utilized for feeding purposes until April 3, twenty-six days after the first stage of gastrostomy. After this the patient was fed regularly by a simple siphon, constructed out of about three feet of india-rubber tubing, with a small bone nozzle at one end, and a two-ounce glass funnel inserted into the other. The man very soon acquired sufficient dexterity to introduce the nozzle through the gastric fistula himself, and by elevation of the funnel ample pressure was obtained, and fluid nourishments easily introduced into the stomach. The smallness of the opening into the stomach, and the direction of the fistula, which was purposely made oblique, afforded a valve-like guard to prevent the return of the food after it had been introduced into the stomach,—an inconvenience which not unfrequently occurs in cases of gastrostomy, when a large and direct opening has been made into the stomach.—*British Medical Journal*, July 22, 1882.

SENATOR ON BULBAR PARALYSIS.—Recently Senator has reported a case (see *Archiv f. Psych.*, Bd. xi. p. 713), which shows that hemianæsthesia alternans may be present though the lesion is confined to the medulla oblongata.

A man, aged 56, without losing consciousness, was seized with vertigo. He had the greatest difficulty in swallowing, had a tendency to fall to the left side, had a feeling of cold in the left half of his face, and had an affection of speech which gave one the impression that he was suffering from some obstruction in the pharynx or larynx. There were no symptoms of motor paralysis, except that the tongue was protruded a little to the left, and the left eye appeared somewhat smaller than the right. The temperature was normal, but the pulse beat 120 per minute. Five days later he was seen by Senator. He was then complaining of difficulty in swallowing, of hunger, and of want of breath. Sensibility was almost completely lost in the left half of the face, and in the whole right half of the body, as well as in the right arm and leg. Attempts to swallow either liquids or solids caused hawking and choking, and the substance was returned sometimes through the nostrils. The voice, once powerful and clear, had become a whisper, and there was still the inclination to fall to the left. The patellar tendon reflex was absent on both sides.

For a week there was little change in his condition. Examination with the laryngoscope showed partial paralysis of the vocal cords. The electro-cutaneous sensibility was either lost or very much diminished in the left face

and in the right half of the body. The patient died of putrid bronchitis and broncho-pneumonia, after an illness of fourteen days in all.

The post-mortem revealed a small focus of softening in the outer portion of the left half of the medulla oblongata, and thrombosis of the left vertebral and posterior inferior cerebellar arteries. The greatest length of the focus was attained a little below the middle of the olivary body; here the restiform body and the contiguous portions of Burdach's column and of the lateral column, the ascending root of the fifth nerve, the motor nucleus of the vagus, and a portion of the fibre of the vagus were all implicated. The olivary body, the root of the hypoglossus, and the nuclei of the hypoglossus and vagus were quite intact.

Senator remarks that the difficulty in swallowing, the snuffing speech (due to paralysis of the pharyngeal muscles), the altered voice, the rapid pulse, the hunger, and the feeling of want of breath were all symptoms indicative in this case of lesion of the vagus nerve. The absence of vaso-motor disturbances (with the exception of a slight and transient lividity of the right arm), of polyuria and glycosuria, is worthy of note; as also the fact that there was no marked defect in the knowledge of the position of the right extremities, notwithstanding the loss of ordinary sensibility in them.—*Brain*, April, 1882.

THE SALMON-DISEASE AND ITS LESSONS.—Prof. Huxley has published some observations on the epidemic known as the salmon-disease, in the Proceedings of the Royal Society. The disease, as is well known, is produced by the growth of a parasitic fungus, and Prof. Huxley looks upon it as a disease of the same order as ringworm in the human subject, as the muscardine of silk-worms, and the potato-disease. This fungus, which belongs to the order *Saprolegnia*, finds a suitable nidus in the skin of that part of the body which is devoid of scales, and generally first attacks the top and sides of the head; thence it may extend widely over the scaly surface also, and deeply into the true skin, causing extensive ulceration and sloughing, so that "one vast open sore may cover the top of the head from the snout to the nape, and may extend over the gill-covers." Several points of general interest have come out in the course of the inquiry: one of these is, that the fungus does not attack the viscera, so that the flesh of the diseased fish is probably not injurious in any way; and it has been said, by those who have made the experiment, that the palate can detect no difference between it and the flesh of healthy fish. This applies probably only to the early stage; for when death—which is produced by exhaustion—is approaching, the flesh no doubt deteriorates in quality. Another interesting point is the manner in which the sloughing of the true skin is produced. The fungus at

first attacks the cuticle, but, after it has taken root there, it sends processes (hyphæ) downwards into the true derma; these processes branch laterally in every direction, and gradually extend deeper and deeper. The tracks of these hyphæ are not accompanied by any obvious inflammation; but they are so closely set that they mechanically interfere with the nutrition of the part, and so lead to sloughing. The third point to which we wish to draw attention is, that the fungus is essentially a saprophyte,—i.e., it ordinarily finds its nidus in dead animal or vegetable tissues, and is only occasionally a parasite upon living organisms. Every stream in the kingdom probably contains indefinite quantities of this and allied fungi, which grow readily on the bodies of dead flies and other insects. Prof. Huxley thus arrives at a conclusion, with regard to this disease, analogous to that to which the student of human pathology is often brought in the case of many infectious diseases,—namely, that, though the parasitic organism may be the determining cause of the train of symptoms which come under observation, there are other, and as yet unknown, circumstances, extrinsic or intrinsic to the infected animal, in the absence of which the parasite cannot develop.—*British Medical Journal*.

THE EPILEPTIC CHANGE AND ITS APPEARANCE AMONG FEEBLE-MINDED CHILDREN.—I. N. Kerlin, in a paper read before the Association of Medical Superintendents of American Institutions for Feeble-Minded Children, at its last meeting, considers some important facts regarding the prognosis and management of a class of peculiarly interesting patients. He concludes:

1. The knowledge gained through careful inquiry proves that early in their lives a very large proportion of feeble-minded or idiotic children present a history either of epilepsy or other neurosis associated with and suggestive always of that disease.

2. The so-called epileptic change is not necessarily accompanied, in the present history of any individual case, with convulsions and insensibility, for these may be transmuted into emotional automatism, eccentricities of behavior or morals, etc., lesser indications of the concealed malady.

3. As a rule, our feeble-minded children manifest their epilepsies in superficial and subjective ways which make them peculiarly admissible of psycho-medical and physiological treatment.

4. By refusing admission for all feeble-minded children who may be epileptic, without discrimination of the essential characteristics and varieties of the disease, we shall surely bar many curable cases of epilepsy whose mental enfeeblement equally requires our skill; also when admitting any feeble-minded child, *without* the open complication of epilepsy as usually described, not unfre-

quently it is discovered that latent epilepsy came with the child: hence the unwisdom, in the first instance, of a course absolutely prescriptive of this unfortunate class of idiocy, and hence, also, the impossibility in the second instance of keeping our institutions entirely free from patients who may exhibit at any time this prominent complication of child-insanity.—*Alienist and Neurologist*.

AN EASY METHOD OF DETECTING THE TUBERCLE-BACILLUS IN SPUTUM.—Professor P. Baumgarten, of Königsberg, publishes, in the *Cbl. f. d. Med. Wissensch.*, the details of a method of discovering the tubercle-bacillus, which he considers simple and handy. It consists in a combination of the potash method proposed by himself with that of Koch and Ehrlich. Dry preparations of phthical sputa are made and moistened with a very feeble potash wash (1 to 2 drops of a 33-per-cent. potash solution on a small watch-glass of distilled water). The bacilli can then be plainly seen with a power of 400 to 500. The bacilli can then be separated from their surroundings by gentle pressure on the cover-glass. In order to exclude the possibility of some other bacillus of similar form being mistaken for the tubercle-bacillus, the cover-glass is now removed, and kept off long enough to allow the moisture adhering to its under surface to dry, which takes place in a few moments. The cover-glass is then passed two or three times through a gas-flame, after which a drop of diluted ordinary aniline-color solution, not too clear, or some other nucleus-coloring aniline solution (a watery extract from the ordinary aniline ink paper will do very well), is dropped on. Under the microscope all the decomposition bacteria now appear an intense blue, or brown, according to the color-tone of the added coloring solution, while the tubercle-bacilli remain absolutely colorless, and are as plainly to be seen as at first. The whole procedure does not occupy more than ten minutes, so that it seems well adapted for practice.

LUPUS OF LARYNX RESULTING IN FISTULA.—Dr. Bennett presented a case of laryngeal fistula, probably of lupoid origin, to the Dublin Pathological Society. The breathing was so changed that it produced the impression of the patient's having been the subject of tracheotomy. Dr. Bennett described the case (*Dublin Journal of Medical Science* for July) as follows:

"On removing the dressing I found that she had a very large ulcerated surface over the lower part of the thyroid cartilage and directly over the crico-thyroid membrane. She is in fair health, and has no hectic or any other symptom to indicate phthisis or tuberculosis. She is free from night-sweats and permanent elevation of temperature and pulse, and has been suffering only from laryngeal distress. This commenced more than a year ago, and the distress of breathing was accompanied

once or twice with expectoration of blood. After six months a swelling came in the mesial line of the neck. Before Christmas the skin broke, and a fistula formed into the larynx. The appearance of the opening now is very different from what it was when I first saw her. It was then an opening which one would regard as either tubercular or, possibly, a lupoid ulceration at the mesial line. It was extremely unhealthy, and was discharging sanious fluid like that from subacute lupus, with sinuous pouches extending down the mesial line to the sternum and laterally, from which one could express pus. The most important point is the change which has taken place in the appearance of the surface. What I wish to invite opinion upon is the nature of the disease; for I have not met with any similar case previously. The behavior of the surface under treatment has been such that in the interval between a fortnight after Christmas and the present time the ulceration has almost healed, except in one remarkable position. In consequence of the dressings the skin appeared irritated a little at the crease of the neck. Just as the wound began to cicatrize the main fold began to ulcerate, and has now all the appearance of a limited lupoid ulceration. An internal examination of the larynx was made, at first with difficulty, owing to the great amount of frothy mucus constantly present. The epiglottis was covered with red spots. The vocal cords on the left side were deeply ulcerated and appeared almost destroyed, and there was considerable ulceration of the larynx, but of a character not to be distinguished with certainty. In order to relieve respiration it was necessary to keep the fistulous opening closed; and even now, when we take the dressing off, respiration is not so easy as when it is covered. A month ago it was possible to pass a probe in several directions into sinuses which are now healed. A week ago the inferior and largest was still open. The whole of the area was ulcerated when she came in. The actual orifice into the larynx is not diminished in size. As to her general health, tonic treatment was necessary, and it was necessary to diminish the cough she suffered from; and accordingly a sedative cough mixture was given, and local applications were used with the wound, consisting of iodoform, and subsequently of compound tincture of benzoin, which has proved most effectual. The iodoform is rather irritating unless it is in weak solution; the tincture of benzoin and the water have been the principal means of bringing about cicatrization. The principal point connected with the treatment is the extreme rapidity of the cicatrization of these rapidly-forming ulcers. The upper one was very rapid, and yet a few applications of the remedies made it cicatrize with the extraordinary rapidity that is observed in lupus. Yet I was slow to make the diagnosis of lupus, because in the recorded cases of lupus of the

larynx there have been always demonstrations of it elsewhere. This woman has no signs of lupus on any other part of her body. The question is, whether the disease of the larynx is tubercular or lupoid. There is no evidence of any syphilitic taint, nor has the patient had any previous illness of importance.

("Subsequently to the presentation of the patient to the Society she was attacked with erysipelas, which wandered over the face, neck, and upper part of the body, having originated at the yet unhealed fistula. The patient suffered much during the progress from laryngeal distress and dyspnoea, with fever, but finally, on the cessation of the erysipelas, the fistula closed completely, and the voice returned very completely. The curative action of erysipelas, so often observed in lupus, is strongly in favor of the view that this is a case of lupus.")

RUPTURE OF UTERUS DURING PARTURITION; WITH PROTRUSION OF INTESTINES—RECOVERY.—Dr. D. W. Bullock reports the following rare case. A colored woman, thirty-five years of age, in labor with the eighth child, had been in labor for eight hours, when she had a very violent uterine contraction, with severe pain, followed by faintness and free flow of blood. It was a hand and knee presentation; the head of the child and right shoulder and arm escaped through a rent into the peritoneal cavity. Intestines shortly afterwards protruded from the vulva. Stimulants were given freely, the child delivered by the feet, and the placenta removed. The intestines were pushed back and held with the hand until ergot and massage produced uterine contraction, when the rent was closed. Septæmia occurred, but by free use of antiseptic drinks, and carbolic acid internally, which the reporter believes has more power over the condition than quinine, salicylic acid, or any other remedy that he had tried, in six weeks the patient had entirely recovered.—*North Carolina Medical Journal*, July, 1882.

IODOFORM IN PHTHISIS.—Dr. Dreschfeld recently read a paper before the Manchester Medical Society on the internal administration of iodoform in phthisis. Many pathologists having now for some time held the view that tuberculosis was an infectious disease, depending on the presence of micro-organisms (a view which had received strong support by Koch's important researches), and that tuberculosis, phthisis, and scrofulosis were closely allied if not identical pathological processes, the author was led, guided by the excellent results obtained in the local treatment of scrofulous disease by iodoform, to try the administration of this drug in phthisis. This experience extended over more than six months, and the results so far obtained were satisfactory. The iodoform was given in the form of inhalation, and internally in the form of pills (one grain per dose), mixed with creasote and dextrine.

The best results were obtained in cases of incipient and acute phthisis; in chronic cases the results were less satisfactory; in a few cases of laryngeal phthisis, the local application of iodoform powder to the ulcerated surface of the larynx was followed by immediate relief and clearing of the ulcers,—without, however, producing healing of the ulcers. The conclusions arrived at were these: 1. Iodoform is well borne by the patient, without producing nausea or gastric irritation. 2. Owing to its anæsthetic properties, it relieves the irritation in the throat and the cough, especially in incipient phthisis. 3. In some cases it increased the digestive powers and appetite, and relieved the vomiting. 4. It reduces slightly the temperature in cases of phthisis with raised temperature. 5. In no case have any bad results followed the inhalation of iodoform. 6. Hæmoptysis forms no counter-indication for its administration (in some cases hæmoptysis entirely disappeared on the administration of iodoform). 7. In incipient phthisis iodoform seems to arrest the disease.—*British Medical Journal*.

EXTENSIVE PLEURAL EFFUSION, CAUSING SUDDEN DEATH.—At a recent meeting of the Dublin Pathological Society, Dr. J. W. Nune reported a case of a woman 50 years of age, who came to the hospital with the statement that she had been ill for three weeks with bronchitis. Examination revealed immobility of the right side, and dulness extending up to within an inch and a half of the clavicle. There was much distress, with rapid breathing, and the patient was extremely ill: she was anæmic, and, somewhat cyanosed. The left lung was hyperæmic, the heart slightly displaced to the left. The patient died rather suddenly during the night. The autopsy showed collapse of right lung, the pleura containing eighty ounces of serum; masses of lymph were found upon the pleural surface. The patient died from collateral congestion of the left lung, and a systole of heart due to the great obstruction.

TREATMENT OF HÆMATURIA CAUSED BY BILHARZIA.—Dr. James F. Allen, of Natal, in a communication to the *Lancet*, states that all the streams and rivers of South Africa are more or less infested by this parasite, and it may be found in the rivers of the whole continent, from Egypt to the Cape of Good Hope. The children, being the largest consumers of unfiltered water, are most subject to the disease, which soon reduces them to a cachectic appearance, but rarely causes fatal effects directly. Dr. Allen recommends local treatment, injecting the bladder with an alcoholic solution of santonin (saturated), using half a drachm at a time. Care must be taken to have the bladder empty of urine. The solution must be thrown into the bladder, and be retained as long as the patient can bear it. Subsequently santonin is given internally, in the usual doses, in order to destroy

the parasite in the blood and complete the cure.

METHOD OF TREATING HARD WATER ON A LARGE SCALE.—In the *Medical Times and Gazette* for August 5 is the following description:

"A new method of purifying and softening hard water in bulk has recently been introduced, under the title of the Atkins process, and promises to be of great public service. The new process is a modification of, and an improvement upon, the old Clark method of lowering the hardness of water, which consisted in adding lime to the water to be softened, and allowing the mixture to stand for twenty-four hours in large reservoirs or precipitating-tanks before it could be used. In the Atkins process, however, the precipitating-tanks are dispensed with, and the water can be used as it is softened: the method being continuous, no time is required for the water to stand and settle. The process essentially consists in purifying the water chemically instead of mechanically, as in ordinary filtration. A small jet of lime-water is introduced into a portion of the water to be softened, and the two are blended in a mixer, whence they flow into a softening-tank, into which the bulk of the water is conducted. From this tank the water, with the lime in suspension, flows into Atkins's rotary disk filters, in which the solid particles are all arrested by an ingenious system of cloth-covered disks placed within a tank, and which present a very large area for filtration within a very small compass. The purified and softened water is next conducted from the filters to storage-reservoirs, ready for use. It is claimed for the lime-water used in this way that it not only purifies and softens the water in bulk, but that it causes any clayey matters that may be held in suspension to coagulate, thus facilitating their removal. The system has already been applied successfully to private water-supplies, notably at the residence of the Duke of Richmond at Goodwood, and at that of Mr. W. H. Smith, M.P., at Henley; while the first experiment at public works has been undertaken at the water-works recently opened at Henley-on-Thames. The water there, which is obtained from the chalk, is normally about ten degrees of hardness; but after treatment by the Atkins process the hardness is found to be reduced to nearly four degrees, which means a beautifully soft water. The apparatus in this instance is calculated to soften and purify one hundred thousand gallons of water per working-day of ten hours."

CHOREA DUE TO ASCARIDES.—In the *Vracheb. Vedom.*, 1882, No. 4 (*London Medical Record*, July 15), is the report of Dr. Lesenevich of an interesting case of so-called sympathetic chorea (*chorea e vermicibus*), in a weak, delicate boy, aged 11, with feebly-developed muscles and pale integuments, who, a month ago, began to complain of ab-

dominal pains and occasional startings in the hands and feet. Later, there were gradually developed true choreic movements, which came in paroxysms of two or three minutes' duration about sixty times during the day. At night the boy was quiet. Each paroxysm was ushered in by slight giddiness, and was followed by a deep sigh and feeling of fatigue. The administration of two full doses of santonin, having expelled twelve round ascarides (*ascaris lumbricoides*), at once stopped all choreic symptoms. [Another interesting instance of "worm" neurosis—Dr. Reckett's case of torticollis due to *oxyuris vermicularis*—is to be found in the *London Medical Record*, June, 1880.—*Rep.*]

NICOTINISM.—Dr. Allen McLane Hamilton, in his work on nervous diseases, says that for the person who presents decided nervous symptoms, traceable to tobacco, no better treatment can be suggested than the continuous use of a tonic containing iron, quinine, and strychnine, such, perhaps, as the following: Strychninæ sulphas, gr. j; quiniæ sulphas, 3j; tinct. ferri chloridi, ʒv; acidi phosph. dil., syr. limonis, aa ʒij. M. Sig.—One teaspoonful in water thrice daily.—*Weekly Drug News.*

LIGATION OF THE INNOMINATE ARTERY.—Mr. Thompson's case of ligation of the innominate, reported in the *Lancet*, is likely to be successful. He writes, "My case has now reached its thirty-fourth day. On the thirtieth day there was some bleeding through the sinus, which reopened. Bleeding stopped spontaneously, and has not recurred. Patient has still a normal temperature; in morning, pulse 88. Tumor perfectly still, and much reduced in size. Some pulsation apparent in region of the ligatured vessel. No carotid, temporal, or radial pulse."

SYPHILIS CONVEYED BY SKIN-GRAFTING.—In a Paris hospital, a short time since, M. Deubel applied a large number of dermo-epidermic grafts upon an old leg-ulcer, which were followed by rapid and complete cicatrization. A month later ulceration recurred, and six weeks later syphilitic roseola appeared. The patient's son, who furnished the grafts, now applied for treatment for mucous patches around the anus, and stated that he had acquired a hard chancre eighteen months before, for which he had not been under treatment. The *Lancet*, in commenting upon this case, declares that the safest rule to follow is to make the patient furnish his own grafts.

HIP-JOINT AMPUTATIONS.—During the past month, three cases of amputation at the right hip-joint were performed in England, with the aid of Mr. Davy's lever for controlling hemorrhage. A case where Mr. McLaren, of Carlisle, operated, lost two ounces of blood; a second patient, under Mr. Cowell's care, at the Westminster Hospital, lost three ounces; and the third case, where Mr. Paul Swain, of Plymouth, performed amputation with the as-

sistance of Dr. Bampton, lost but one ounce and a half. All these patients are progressing favorably.—*British Medical Journal.*

SCHIZOMYCETES IN ACUTE FIBRINOUS PNEUMONIA.—The view of Klebs, Eberth, and Koch with regard to the presence of schizomycetes in acute pneumonia is endorsed by C. Friedländer (*Virchow's Archiv*, Bd. xxxvii.), who reports eight consecutive cases in which microorganisms were detected in the expectoration and in sections of pulmonary tissue. They were readily found in the fibrinous expectoration, but were especially abundant in the grayish-red hepatization, much scarcer in the gray and grayish-yellow portions of the lung. The micrococci were elliptical in shape, almost an "μ" long, and a third less broad. They were usually in pairs (*diplococcus*), but sometimes formed chains.—*Centralblatt für Chirurgie*, August 12.

NERVE-STRETCHING — URETER-STRETCHING.—The *London Medical Record* quotes from the *Deutsch Med. Wochenschrift* a letter which gives a "fling" at the nerve-stretchers. The writer speaks of ureter-stretching for granular kidney. He has also stretched the hepatic duct for cirrhosis, and intends to stretch not only the pneumogastric nerves, but also the bronchi for chronic contraction of the lung. He also asks, "Might not general paralysis of the insane be cured by simple extraction of the teeth and stretching of the respective twigs of the dental nerves? I will try it. A new era is dawning! Here is, indeed, an art, and, while we live, let us stretch!"

TYPHOID FEVER TREATED BY COPPER.—Burq, having observed immunity from cholera among copper-workers, recommended the use of copper in the treatment of enteric fever. Hæhnlé (*Memorabilien*, Jahrg. xxvi. Heft 8) has carried his suggestion into practice, and has found that copper is a specific and valuable remedy in many cases of typhus. He administered 1.5 grammes of the tincture of the acetate of copper (*German Pharmacopœia*) in the course of two days, giving a portion of it every two hours. Reduction of temperature to the extent of from two degrees of Fahrenheit followed in from one to two days. Vomiting or diarrhoea does not contra-indicate its employment, and the copper does not appear to injure the stomach. Its mode of action is doubtful, Hæhnlé suggesting that it may act as an antiseptic.—*London Medical Record.*

COMPOSITION OF ST. JACOB'S OIL.—Dr. Squibb, in his *Ephemeris* (No. 4), says that St. Jacob's Oil appears to be a feeble and badly-made aconite liniment, and that it consists mainly of water, ether, alcohol, turpentine, and a small proportion of aconite, with red coloring-matter.

CODEIA IN DIABETES.—The use of codeia in diabetes, first recommended by Pavy, seems worthy of more extended use than it has at-

tained. In the *British Medical Journal*, June 24, several cases are reported by Dr. R. S. Smith, in which the results were very satisfactory, all exhibiting marked improvement while taking the remedy.

MISCELLANY.

PROSTITUTION AS OBSERVED IN CANTON, CHINA.—At the City Foundling-House in Canton, female infants (generally illegitimate) are sold for seven hundred cash (seventy-five cents) to any one who states that he wishes to bring the child up as a servant and in a respectable manner. This trade is carried on without the knowledge of the government directly, but merely to fill the pockets of those in charge of the institution. If a mother is too poor to support her child, and it is a female (males are never sold, as they only can worship at the tomb of their departed ancestors, and every Chinese parent wishes to leave behind him a son for this purpose), she takes it to the Foundling-House, and simply leaves it there. Owners of houses of prostitution come and select the infants which give promise of greatest beauty or best health, and buy them. They have them cared for on boats made for the purpose, so as to keep them apart from the world at large. They are well fed, and most carefully guarded from exposure to the sun, so as to secure as white a complexion as possible. Here they are trained for their future work. At the age of twelve they are put in the society of women considered accomplished in the business, and at fifteen they begin the life which is soon to become a misery. Now, should one of these girls be seen by a rich Chinaman who wishes to add another concubine to his family, he may buy her and take her to his home, where, if she be a favorite, she is sure of kind treatment; and any children she may have rank in every way with those by his first or real wife, even to inheriting property. Those of the prostitutes who are not so fortunate are treated kindly or otherwise in proportion to the amount of money they make for their master.—F. CARROW, M.D.: *Maryland Medical Journal*.

RAGS AND INFECTIOUS DISEASES.—In a report to the Local Government Board (*British Medical Journal*, July 8), Dr. Parsons discusses in much detail, and with considerable breadth of view, the precautions that are possible or desirable to prevent the spread of disease by rags; and on a general consideration of all the complex circumstances of the case, he arrives at the following conclusions: 1. Cases of infection by means of rags do occasionally occur, although, comparatively speaking, not very frequently. 2. Smallpox is the disease most likely to be thus conveyed. 3. All rag-workers should be vaccinated and revaccinated. 4. Dust should be avoided.

The preliminary dusting of the rags before sorting is to be recommended, but the dust should not be allowed to contaminate the air of the workroom. 5. Certain measures of disinfection are available, among which, exposure to air, fumigation with sulphurous acid, and exposure to hot air or high-pressure steam may be mentioned, each of which has its advantages and drawbacks under certain circumstances. 6. In the absence of means by which it may be known whether or not rags have been infected, the cases in which disinfection would appear specially desirable are—(a) rags from places where epidemics are known to exist; (b) rags in a filthy state; and perhaps (c) foreign rags, especially if coming within the two previous categories. 7. Under existing circumstances it is not advisable that any obligation as to disinfecting rags, other than that already imposed by Section 26 of the Public Health Act, 1875, should be imposed upon persons engaged in the rag-trade.

WATERMELON SUGAR.—Mr. W. W. Seay, of Rome, Georgia, is experimenting with watermelons for the purpose of extracting sugar. His experiments so far, in a small way, induce him to believe that a fair lot of melons contain an average of seven per cent. of saccharine matter, or pure sugar. He estimates that on one acre of good land, suited to their growth, 34,500 pounds of melons would grow, and these would produce, at seven per cent. of saccharine matter, 2415 pounds of sugar, and worth, at ten cents, \$241.50. This sounds very nice, but the results of a few practical experiments would be more satisfactory.—*Weekly Drug News*.

NOTE ON EXCESSIVE SWEATING OF THE FEET.—The patient is directed to immerse his feet morning and night, for about ten minutes, in warm water at 115° to 120° F. in which a teaspoonful (3i) of powdered commercial soda (impure carbonate of soda) is dissolved. The feet are then thoroughly dried, after which they are painted all over with a coating of compound tincture of benzoin, which acts as an antiseptic astringent and by its mechanical presence on the skin. This treatment is continued for about ten days, after which it is practised once daily, or every other day, as the necessities of the case may require.—E. MEIERHOF, M.D.: *Maryland Medical Journal*.

A PHENOMENAL CANARY.—There is at present in the possession of Dr. J. McGregor Croft a canary-bird which, besides giving utterance to delicious warblings, is also able to "talk" with a clearness and precision simply marvellous. The canary does veritably *speak*, and enunciates a number of sentences which are clearly imitative of the voice of the lady who has had care of it since its early youth. The effect, indeed, produced by the clear, sweetly-uttered sentences pronounced by the bird is almost weird at first; but the feeling of wonder thus created quickly

gives rise to a sensation of exquisite pleasure, which is deepened as the little creature suddenly at the end of a sentence rushes off into an ecstasy of song.—*Dublin Press and Gazette*.

ASTRAGALUS MOLLISSIMUS.—Among the plants destructive to cattle in the West is the *Astragalus mollissimus*, whose physiological action has recently been studied by Dr. Isaac Ott, of Easton, Pa. He summarizes it as follows:

"1. It decreases the irritability of the motor nerves.

"2. Greatly affects the sensory ganglia of the central nervous system, preventing them from readily receiving impressions.

"3. Has a spinal tetanic action.

"4. Kills mainly by arrest of the heart.

"5. Increases the salivary secretion.

"6. Has a stupefying action on the brain.

"7. Reduces the cardiac force and frequency.

"8. Temporarily increases arterial tension, but finally decreases it.

"9. Greatly dilates the pupil."—*New Remedies*, August, 1882.

THE RELATIONS OF ASTHMA AND MUCOUS POLYPI OF THE NOSE.—Dr. Joal terminates a paper in the *Archives G n rales* for May with the following conclusions: 1. Mucous nasal polypi sometimes give rise to dyspnoea of an asthmatic nature. 2. This symptomatic asthma is principally observed in arthritic subjects. 3. It is most frequently produced by a reflex action consequent upon the irritation of the nasal mucous membrane. 4. The point of departure of this action may be the sensitive filaments of the pneumogastric which line the pharyngeal or bronchial mucous membranes. 5. The asthma may be developed by the fact of catarrhal and emphysematous lesions attributable to the nasal polypi. 6. The asthmatic symptoms are either amended or disappear after the removal of the polypi. 7. The nervous disturbance induced by the polypi consists sometimes of spasmodic sneezing coming on in paroxysms.

THE EFFECT OF ALCOHOLIC DRINKS ON DIGESTION.—From a series of experiments with artificial digestive fluids, B chner (*Deutsche Archiv f r Klin. Med.*) finds that beer undiluted stops digestion, and if diluted retards the process; wines act in a similar manner; both beer and wine hinder digestion, even when in small quantities, and this action is increased if there is coexisting disorder of the stomach. He concludes that these agents should be given with caution or entirely withheld in cases of gastric catarrh.

AN ADVERTISING DOCTRINE of this city—Mrs. Rodgers—has been arrested for malpractice, and the testimony appears direct enough to secure conviction. It is so hard to trap these creatures that they should be promptly convicted when caught, as a warning to others.

DR. MORELL MACKENZIE, of London, now in Canada, will make an early visit to this city, and preparations are being made to give him a reception.

LECTURES of the Preliminary Course began at both the University of Pennsylvania and Jefferson College on the 11th instant.

LANGENBECK'S SUCCESSOR.—Professor Von Bergmann, of W rzburg, has accepted the position at Berlin just vacated by Von Langenbeck on account of failing health.

SIR JOHN LUBBOCK (*Journal of the Linnean Society*) concludes, from a prolonged and careful series of experiments, that bees distinguish colors, and that they have a decided preference for blue.

EXPLOSION OF CARBON BISULPHIDE.—A fatal explosion recently occurred at Bradford, England, due to the escape of carbon bisulphide into the public sewer. It appears to have come from a grease-works where it had been used in the extraction of oil from seeds.

DR. CHARLES SMART has been elected secretary of the National Board of Health, *vice* Dr. Turner, resigned.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 1 TO SEPTEMBER 16, 1882.

WRIGHT, J. P., SURGEON.—Granted leave of absence for one month, with permission to apply for an extension of one month on surgeon's certificate of disability. S. O. 181, Department of the Missouri, September 8, 1882.

MADDOX, T. J. C., ASSISTANT-SURGEON.—To proceed from Fort Clark, Texas, *via* San Antonio and Laredo, to Fort Brown, Texas, for duty. S. O. 96, Department of Texas, September 8, 1882.

WAKEMAN, WILLIAM J., ASSISTANT-SURGEON.—Assigned to duty at Fort Douglas, Utah. S. O. 91, Department of the Platte, September 1, 1882.

COMEGYS, E. T., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Supply, Ind. Ter. S. O. 174, Department of the Missouri, August 30, 1882.

HUBBARD, VAN BUREN, MAJOR AND SURGEON.—Orders to Fort Wingate, N. Mex., revoked. To report to Commanding Officer, District of New Mexico, for duty at Fort Stanton, N. Mex. S. O. 174, Headquarters of the Department of the Missouri, August 30, 1882.

TAYLOR, MORSE K., ASSISTANT-SURGEON.—Relieved from duty as attending surgeon at Detroit, Mich. S. O. 157, Department of the East, September 9, 1882.

CORSON, JOSEPH K., CAPTAIN AND ASSISTANT-SURGEON.—Granted two months' leave of absence. S. O. 210, A. G. O., September 9, 1882.

SHUFELDT, ROBERT W., CAPTAIN AND ASSISTANT-SURGEON.—Now awaiting orders, to report by letter to the Commanding General, Department of the South, for assignment to duty. S. O. 209, A. G. O., September 8, 1882.

BACHE, DALLAS, SURGEON.—Informed by Adjutant-General of acceptance of his certificate of disability of August 31, 1882. On sick leave from September 1 to September 30, 1882.

WRIGHT, J. P., SURGEON.—Granted one month's leave of absence, with permission to apply for extension of one month on surgeon's certificate of disability. S. O. 181, Department of the Missouri, September 8, 1882.

HORTON, S. M., MAJOR AND SURGEON.—Granted one month's leave of absence on surgeon's certificate of disability. S. O. 96, Department of the Platte, September 11, 1882.

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